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KAN

THE

ENCYCLOPÆDIA

OF

GEOGRAPHY:

COMPRISING A

COMPLETE DESCRIPTION OF THE EARTH,

PHYSICAL, STATISTICAL, CIVIL, AND POLITICAL;

EXHIBITING ITS RELATION TO THE HEAVENLY BODIES,

ITS PHYSICAL STRUCTURE,

THE NATURAL HISTORY OF EACH COUNTRY,

AND THE INDUSTRY, COMMERCE, POLITICAL INSTITUTIONS,

AND CIVIL AND SOCIAL STATE

OF

ALL NATIONS.

BY HUGH MURRAY, F.R.S.E.

ASSISTED IN

ASTRONOMY, &c. BY PROF. WALLACE, | BOTANY, &c. BY PROFESSOR HOOKER,
GEOLOGY, &c. BY PROF. JAMESON, | ZOOLOGY, &c. BY W. SWAINSON, ESQ.

ILLUSTRATED BY EIGHTY-TWO MAPS,

AND ABOUT ELEVEN HUNDRED OTHER ENGRAVINGS ON WOOD,

REPRESENTING THE MOST REMARKABLE OBJECTS OF NATURE AND ART

IN EVERY REGION OF THE GLOBE,

TOGETHER WITH A

NEW MAP OF THE UNITED STATES.

REVISED, WITH ADDITIONS,

BY THOMAS G. BRADFORD.

IN THREE VOLUMES.

VOL. II.

PHILADELPHIA:

CAREY, LEA, AND BLANCHARD.

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CHAPTER XI.

ITALY.

ITALY is an extensive region in the south of Europe, one of the finest in the world as to soil and climate, and noted as the theatre of many of the greatest events in history. It is now in a state of degradation and decline, but is filled with grand monuments, and scenes calculated to awaken the most lofty recollections.

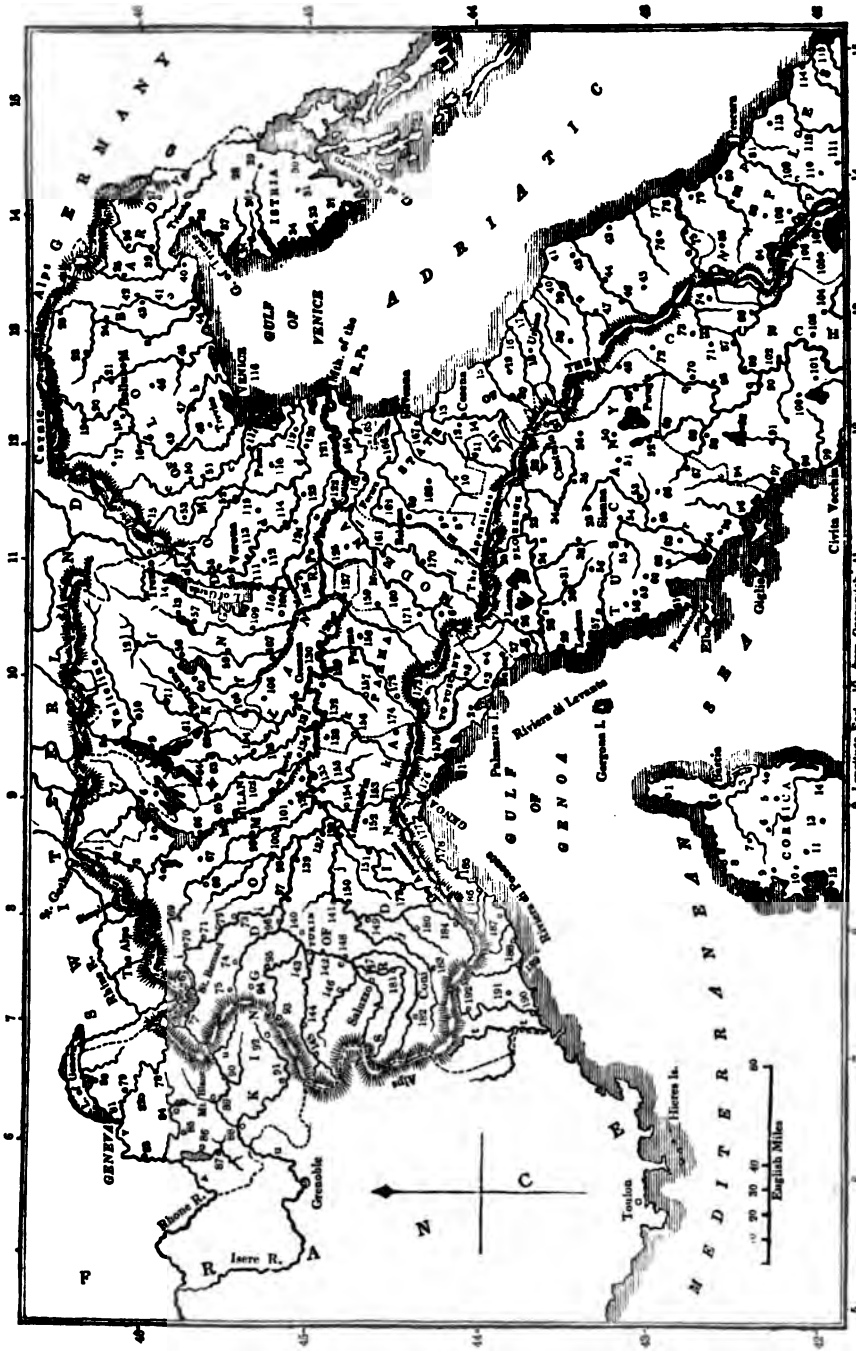
SECT. I.—*General Outline and Aspect.*

Italy is bounded on the north, and partly on the west, by the vast and continuous range of the highest Alps, which separate her from what she disdainfully terms the ultramontane regions of France, Italy, and Switzerland. All the rest of her circuit is enclosed by the Mediterranean and its great gulfs, of which the Adriatic, in the east, separates her from the opposite shores of Greece and Illyria. On the west she borders on the broadest basin of the Mediterranean, beyond which are the shores of France and Spain. On the extreme south she almost approaches the African coast. The greatest length is north and south from about 36° 40′ to 47°, or 700 English miles; the extreme breadth, between the Rhone in Savoy and the Isonzo, lies between 6° and 13° east longitude, and may comprehend 350 English miles. This applies only to the broad belt of Northern Italy, as all the rest of the territory stretches obliquely in the form of a long narrow boot, the average breadth of which does not exceed 100 miles. The whole extent may be reckoned at 127,000 square miles, including Sicily and Sardinia.

The surface of Italy is the most finely diversified of perhaps any country in the globe. It has the loftiest mountains, and the most beautiful plains in Europe. All the chains of the Alps, the Cottian, the Pennine, the Lepontine, the Rhætian, the Julian, which belong only in part to other kingdoms, range along her frontier. Some of their proudest pinnacles, Mont Blanc, St. Bernard, Mont Rosa, are within the Italian territory, and their white summits are seen amid the clouds in continuous grandeur along the whole extent of the plains of Lombardy and Piedmont. The Apennine is a chain purely Italian. It branches off first from the

Apennines in Calabria.

Maritime Alps on the western frontier, and runs for a long space eastward, leaving on the south only a narrow plain between it and the Mediterranean; while on the north it forms the boundary of Piedmont and Lombardy. On the Tuscan border it gradually bends round to the south and south-east, following, or rather prescribing the form of the Peninsula, of which it occupies the centre, in one unbroken line. It does not aspire to the awful height, or wrap itself in the perpetual snows, of the Alps. Its highest pinnacle in the Abruzzo, called the great rock of Italy, does not rise much above 9500 feet. These mountains are consequently, in this climate, throughout, covered with luxuriant foliage; on the lower slopes are the vine and the olive, higher up, the various forest trees, among which the chestnut affords copious food to the inhabitants. They enclose finely cultivated valleys, and


ADRIATIC
GULF OF VENICE
GULF OF GENOA
MEDITERRANEAN
Genoa
Turin
Milan
Venice
Verona
Trieste
Florence
Leghorn
Pisa
Ancona
Naples
Rome
Civita Vecchia
Elba
Corsica
Toulon
Grenoble
Nice
Riviera di Levante
Riviera di Ponente
Rhone R.
Isere R.
Po R.
Tiber R.
Arno R.
Alps
Apennines
English Miles

A D R I A T I C
Gulf of Taranto
Gulf of Policastro
Gulf of Eufemia
Gulf of Squillace
Gulf of Gaeta
Gulf of Naples
Gulf of Salerno
Gulf of Gioia
Gulf of Sta Eufemia
Gulf of Catania
Gulf of Hammamet
Gulf of Cabes
Gulf of Sidra
Gulf of Sirte
Gulf of Bomba
Gulf of Venice
Gulf of Manfredonia

are full of deep, intricate, and wooded defiles. As their branches, dividing into low hills of varied form, touch upon the fine plains along the Mediterranean, they produce a variety of bright and smiling scenes, which entitle Italy to be considered as the peculiar region of landscape. In the southern quarter they assume a very formidable and volcanic character, pouring deluges of burning lava from the cone of Vesuvius, and convulsing Calabria with the most terrible earthquakes. Their aspect in that country is peculiarly formidable and rugged (*fig.* 332.). Beyond the straits of Messina, where they present to the mariner the perilous forms of Scylla and Charybdis, they cover Sicily with mountains, among which the celebrated peak of Etna (*fig.* 333.) rises to a height which only the Alps can surpass, while it throws out, amid the snows, volcanic eruptions as remarkable as those of Vesuvius.

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Mount Etna.

The plains of Italy are as remarkable for their extreme beauty as the mountains for their grandeur. The most extensive is that of the Po, or of Lombardy, between the Alps and Apennines, which, being profusely watered, highly cultivated, and under a genial climate, is, perhaps, the richest and most productive region in Europe. The Apennines, in their course southward through the centre of Italy, divide it into two plains, of which that on the east is narrow, and often crossed by branches from the main ridge, which present their bold cliffs to the Adriatic. On reaching the Neapolitan territory, the plain becomes wider and more fertile, being covered with rich pastures and vast plantations of olives. But it is on the western side that Nature most profusely displays her beauties, and that the grand seats of civilisation and power have been established. The Tuscan champaign is scarcely considered as composed of more than two broad valleys, those of Florence and of Pisa; but the *Campagna Felice* of Naples, the voluptuous environs of

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NORTH PART.
1. Valda
2. Crevola
3. Duomo d'Ossola
4. Omegna
5. Cannobio
6. Lugano
7. Bellinzona
8. Chiavenna
9. Bellono
10. Morbegno
11. Corvamena
12. Edolo
13. Bordon
14. Riva
15. Borgo di Valsugana
16. Feltre
17. Primero
18. Belluno
19. Longana
20. Rai
21. Ainano
22. Tolmezzo
23. Malborghetto
24. Osopo
25. Cividal
26. Canale
27. Readerta
28. Citta Nuova
29. Rosso
30. Albon
31. Petina
32. Pola
33. Moncalvo
34. Parenzo
35. Buje
36. Saregna
37. Capo d'Istria
38. Trieste
39. Goritza
40. Aquileja
41. Castello
42. Udine
43. Campo Formio
44. Marano
45. Meduna
46. Cerneda
47. Masserada
48. Treviso
49. Fanara
50. Bassano
51. Cittadella
52. Vicenza
53. Cologo
54. Calrano
55. Ossenigo
56. Garda
57 Ano
58. Pisogni
59. Brescia
60. Eodino
61. Bergamo
62. Trezzo
63. Monza
64. Como
65. Saronno
66. Angera
67. Bo. Manaro
68. Crevacore
69. Riva
70. Chatillon
71. Ft. di Bard
72. Ivrea
73. Tino
74. Ponte
75. Seresola
76. Aosta
77. Morge
78. Salence
79. Bonneville
80. Thonon
81. Geneva
82. Cruseilles
83. Seissel
84. Annecy
85. Kamilly
86. Aix
87. Chamberry
88. Aigue Belle
89. Conflana
90. Moutiere
91. St. Andre Modane
92. Termignon
93. La Novalesa
94. Balma
95. Lanzo
96. Chivasso
97. Crescentino
98. Vercelli
99. Novara
100. Zema
101. Dormo
102. Milan
103. Lodi
104. Paullo
105. Crema
106. S. Leone
107. Ponte Vico
108. Mariano
109. Monte Chiaro
110. Giota
111. Peschiera
112. Villafranca
113. Verona
114. Legnano
115. Cologna
116. Venice
117. Padua
118. Este
119. Cavarzeve
120. Rovigo
121. Crespino
122. Ficarnola
123. Badia
124. Vigo
125. Mirandola
126. Mantua
127. Guastalla
128. Casal
129. Gibello
130. Cremona
131. Pizzighettone
132. Placentia
133. Arcello
134. Pavia
135. Voghera
136. Lumello
137. Valenza
138. Alessandria
139. Casale
140. Superga
141. Asti
142. Moncalier
143. Turin
144. Susa
145. Oulx
146. Pinerola
147. Saluzzo
148. Carignano
149. Cherasco
150. Alba
151. Aqui
152. Novi
153. La Bocchetta
154. Tarlana
155. Bagnara
156. Bobbio
157. Anresa
158. Parma
159. Reggio
160. Congiano
161. Modena
162. Porto M.
163. Ferrara
164. Codigora
165. Comacchio
166. Argento
167. Ravenna
168. Imola
169. Bologna
170. Guin
171. Castelnuovo
172. Belfort
173. Pontremoli
174. Ascona
175. Rapalo
176. Genoa
177. Utre
178. Savona
179. Goregno
180. Mondovi
181. Savigliano
182. Bellino
183. Coni
184. Garessio
185. Finale
186. Albenga
187. Oneglia
188. St. Remo
189. Vintimiglia
190. Nice
191. Scarena
192. Tenda

SOUTH PART.
1. Porto Fino
2. Spezzia
3. Sarzana
4. Strettoja
5. Capriala
6. Siliano
7. Riolo
8. Sericalasino
9. Lojano
10. Tossignano
11. Modigliano
12. Forli
13. Cervia
14. Cesena
15. Rimini
16. Pesaro
17. Fano
18. Urbino
19. S. Marino
20. S. Leo
21. Soria
22. Poppi
23. Florence
24. Empoli
25. Pistoia
26. Lucca
27. Massa
28. Pisa
29. Leghorn
30. Lari
31. Loiatico
32. M. Reggiore
33. Sienna
34. Figline
35. Levane
36. Arezzo
37. Castello
38. Cagli
39. Tessi
40. Sinigaglia
41. Ancona
42. Recanati
43. Fermo
44. Macerata
45. Gualdo
46. Camerino
47. Matelica
48. Gubbio
49. Perugia
50. Cortona
51. M. Pulciano
52. Chiusi
53. Buoconvento
54. Muciaretto
55. S. Galano
56. Volterra
57. Riparbella
58. Ribbona
59. Borghera
60. Campiglia
61. Piombino
62. Massa
63. Tatti
64. Grossetto
65. Porronia
66. Radicofani
67. Aquapendente
68. Orvieto
69. Citta Della Pieve
70. Ici
71. Spoleto
72. Assisi
73. Foligno
74. Norcia
75. Ascoli
76. Mt. Alto
77. Ripatransone
78. Tronto
79. S. Omero
80. Atri
81. Pescara
82. Teramo
83. Ofena
84. Aquila
85. Mt. Corno
86. Chieti
87. Terni
88. Todi
89. Narni
90. Orte
91. Toscanella
92. Montefiascone
93. Bolsena
94. Sovanna
95. Monteano
96. Orbitello
97. Montalto
98. Corneto
99. Civita Vecchia
100. Sutri
101. Cesano
102. Magliano
103. Cretone
104. Virovaro
105. Albe
106. Ocra
107. Celano
108. Navelli
109. Pololi
110. Sulmona
111. Canzano
112. Mt. Marcello
113. Lanciano
114. Vastro
115. Termoli

CORSICA.
(North Part.)
1. Pino
2. St. Florent
3. Bastia
4. Cervione
5. Arbitro
6. Corte
7. Prato
8. Calvi
9. Pinto
10. Vico
11. Lopigna
12. Alato
13. Tolla
14. Migliacciaro.

Rivers.
a Tagliamento
b Piave
c Brenta
d Adige
e Po
f Oglio
g Adda
h Ticino
i Baltea
j Tanaro
k Trebia
l Panaro
m Reza
n Reine
o Tronto
p Pescari
q Tiber
r Ombrone
s Arno
t Var
u Isere
v Rhone

Capua, appear to unite all the richness of Lombardy with aspects much more varied and picturesque, and are usually considered the most delightful country in Europe. All this side of Italy, however, is subject to a dreadful scourge, the malaria or pestilential influence arising from a marshy and swampy surface. The Pontine Marshes are in this respect so dangerous, that in the hot season they can scarcely be crossed, even hastily, without the peril of death. But it is round the imperial city itself, and at its very gates, that the malaria appears peculiarly desolating. The campagna of Rome, which cultivation and draining rendered formerly one of the finest spots of Italy, has, under the present proud and indolent rule, been so far neglected, that the pernicious influences of its low and swampy soil have gained a fearful ascendency. They have rendered it uninhabitable for a great part of the year; and this "storied plain" is become a desert, covered with a few scanty herds; and a deep solitude now encircles the fallen metropolis of the world.

The rivers of Italy scarcely correspond to their fame, or to the lofty and classic recollections attached to their names. The Po, which waters the plain of Lombardy, and drains all the waters of the Alps and northern Apennine, can alone be ranked among the great rivers of Europe. It rises on the frontier of France, amid the loftiest recesses of the Cottian Alps, and rolls due east the whole breadth of Italy to the Adriatic, a course of about 400 miles. Its tributaries on both sides are very numerous, though none have space to expand into great rivers. The alpine streams of the Tesino, the Adda, and the Oglio, are absorbed soon after they have left their deep mountain valleys or lakes. The Adige makes its way entirely over from Germany in the valley between the Rhætian and Julian Alps, and falls into the Adriatic not far from the Po. These rivers being always full, and crossing the main line of communication, form important military barriers. They preserve also the plain in a state of perpetual fertility, though they often cause considerable calamity by their inundations. The tributaries from the south are also numerous, but, with the exception of the Tanaro and the river of Genoa, of no remarkable magnitude. The rivers of Lower Italy would scarcely deserve mention, but for the high associations of history and poetry. The far-famed Tiber itself, which on this ground, "with scorn the Danube and the Nile surveys," is described by Addison as deriving its scanty stores from an unfruitful source. It drains, however, a considerable extent of the Apennine, and its entire course may be 150 miles. The Arno of Florence and the Lirio of Campagna are only distinguished for the beauty of the vales through which they meander.

Lakes are not a feature very characteristic of Italy. Nevertheless, the waters which descend from the southern face of the Alps, spread into the long and winding lakes, Maggiore, Como, and Garda, which extend into the plain of Lombardy. The scenery of these lakes has not the grand and solemn character of those of Switzerland, which are enclosed in the depth of the highest Alps; but they are beautiful in the extreme. The lower banks are bordered by gentle hills covered with vines and luxuriant verdure; while their heads are crowned by the snowy summits of the Alps. The Apennine is not a lake-producing chain; it only forms on its eastern border a few that are small, and very beautiful, Perugia, Celano, Bolsena, &c.: Sicily is also without lakes.

References to the Map of Italy.—South Part.

NORTH PART.
1. Civita Vecchia
2. Palo
3. Ostia
4. Rome
5. Tivoli
6. Palestrina
7. Virovaro
8. Sora
9. Api
10. Canzano
11. Rca. Spinavieto
12. Termoli
13. Serna
14. S. Severo
15. Mt. Gargano
16. Viesti
17. Manfredonia
18. Lucera
19. Campobasso
20. Trivento
21. Sangro
22. Isernia
23. St. Germano
24. Arpino
25. Veroli
26. Albano
27. Cisterno
28. Sesse
29. Pogliano
30. Terracina
31. Pondi
32. Gaeta
33. Sessa
34. Cacasso
35. Benevento
36. Troja
37. Foggia
38. Cirignola
39. Barletta
40. Minervino
41. Trani
42. Bitonto
43. Bari
44. Monopoli
45. Ostuni
46. Le Noci
47. Conversano
48. Bitetto
49. Altamura
50. Gravina
51. Venosa
52. Conza
53. Quaglitto
54. Avellino
55. Caserta
56. Capua
57. Naples
58. Salerno
59. Moro
60. Marsico Nuovo
61. Potenza
62. Cavano
63. Matera
64. Molola
65. Marlino
66. Brindisi
67. Oria
68. Lecce
69. Veglie
70. Otranto
71. Ugento
72. Gallipoli
73. Nardo
74. Casalvolo
75. Monacisso
76. Tarento
77. Castellanetta
78. S. Basilio
79. Turzi
80. Corneto
81. Lago Negro
82. La Polla
83. Pesto
84. Torchiara
85. Policastro
86. Morano
87. Scalea
88. Crivole
89. Cassano
90. Bassano
91. Bisignano
92. St. Marco
93. Fuscaldo
94. Diano
95. Cosenza
96. Grenza
97. Umbriatico
98. Cariati
99. Strongoli
100. Cotrone
101. Cutra
102. Belcastro
103. Nicastro
104. Castiglione
105. S. Eufemia
106. Cartanzaro
107. Squillace
108. Tropea
109. Isca
110. La Roccella
111. Siderno
112. Gerace
113. Scilla
114. Reggio
115. Melito.

Rivers.
a Trigno
b Biferno
c Folare
d Ofanto
e Basiento
f Agri
g Sinno
h Crati
i Sele
j Volturno
k Sacco
l Tiber.

SICILY.
1. Messina
2. Scaletta
3. Melazzo
4. Patti
5. S. Marco
6. Mistrella
7. Cefalu
8. Termini
9. Palermo
10. Morreale
11. Alcamo
12. Trapani
13. Marsala
14. Mazzara
15. Sciacca
16. Corleone
17. Castro Nuovo
18. Vicari
19. Pire
20. Castello Giovanni
21. Nicosia
22. Rhandazzo
23. Taomina
24. Catania
25. Paterno
26. Lentini
27. Meonoo
28. Piazza
29. Caltanisetta
30. Sutera
31. Girgenti
32. Palma
33. Naro
34. Butera
35. Terra Nuova
36. Chiaramonte
37. Modica
38. Scillei
39. Noto
40. Syracuse
41. Augusta.

Rivers.
a Belice
b Platina
c Salso.

SARDINIA.
1. Terranuova
2. Tempio
3. Oschiri
4. Sassari
5. Alghero
6. Bosa
7. Orieri
8. Bora
9. Posada
10. Irgoli
11. Nuoro
12. Baunei
13. Gadoni
14. Teti
15. Sedilo
16. Cuglieri
17. Oristano
18. Tertenia
19. Ballan
20. Mandas
21. Guasila
22. S. Luri
23. Iglesina
24. Palma
25. Cagliari.

Rivers.
a Tirsi
b Massari
c De Palma
d Manau.

CORSICA.
1. T. Ceposa
2. Zicavo
3. Ajaccio
4. Cagnacoli
5. T. Solenzaro
6. Pto. Vecchio
7. Sartena
8. Gunchetto
9. Bonifacio.

SECT. II.—*Natural History.*

SUBSECT. 1.—*Geology.*

The geognosy of this country has, of late years, engaged the particular attention of naturalists; consequently, numerous new facts and views have been added to those formerly known. The writings of Dolomieu, Hamilton, Von Buch, Spallanzani, Brocchi, Breislac, Brongniart, Hausmann, Daubeny, Monticelli, Covelli, &c. are among the most interesting with which we are acquainted as illustrative of the mineral history of Italy and its islands; and to these we refer our readers. The following observations will convey a general idea of the geognostical structure and composition of this interesting country.

The geognostical structure of the central part of the Apennines is very simple; the mountains of that division of the range being composed of a white limestone which rarely contains foreign beds, and but seldom fossil organic remains. It is there, too, that the range is loftiest, and is also the broadest. But this simplicity of construction does not continue throughout the whole Apennine range; for, from the point where it rises from the Alps to the country of Florence, it is composed of strata and beds of slate, limestone, and a magnesian rock, named in Tuscany *gabbro* and *granitello*. The summits of the mountains of the country of Genoa, which overlook the Gulf of Spezzia, are principally formed of this latter substance, which is the *euphotide* of geologists. Some geologists consider this part of the range as of primitive formation; while others, as Professor Hausmann, view it as belonging to the transition class of rocks, because he finds it containing, intermingled with the rocks just mentioned, extensive deposits of greywacke. A limestone, resembling that of the Jura, forms all the mountains extending from Florence to Abruzzo, and from Abruzzo to Calabria. It is only in the latter province that the central part of the chain is formed of granite, gneiss, mica slate, and other primitive rocks; resting upon which, in the lower parts of the country, there are deposits of tertiary rocks.

The sub-Apennine hills belong to the tertiary series, and are composed of marls, slate clays, gravel, sands, and conglomerates. We observe also in these hills, but less frequently, gypsum, calcareous tuffas, and volcanic tuffas. A limestone of modern formation abounds in the neighbourhood of Rome, and is known under the name *travertino*, and of which the principal monuments of that city are built.

The Apennines are not rich in metals. The most considerable mines are those of *iron*, which occur in Tuscany, and chiefly in the island of Elba, a tract composed of primitive rocks. The *coal mines* in this chain are of but little importance, but there are great deposits of *salt* in the province of Cosenza. The principal mineral treasures of the Apennines are the *marbles*, of which the most celebrated are those of Carrara, Seravezza, and Sienna.

Ancient volcanoes do not occur in the central part of the Apennines; all of them, with one exception, the hill of Voltore, near to the town of Melfi, in the province of Basilicata, are situated on the south-western declivity of the chain. They form an interrupted chain, which is passed over on the road from Sienna to Rome. The most elevated spots of this district, such as the Monte Cimini near Viterbo, and the Monte Amiata, appear composed of trachyte. It is associated with basalt at Viterbo, where it is columnar, and rests on a bed of pumice and tuffa, containing the bones of quadrupeds. Near Viterbo is a small lake which is in a constant state of agitation, owing to the emission of sulphuretted hydrogen gas; and a little nearer, on the road to Rome, is the Lake of Vico, formerly the Lacus Cimini, which has all the appearance of a crater. The Lake of Bolsena, between Viterbo and Sienna, possesses the shape of an ancient crater, and its being bounded by volcanic rocks is consistent with this opinion. The country around Rome, and also the hills on which the city is built, is composed of tertiary marls, clays, and sandstones, intermixed with a preponderating quantity of granular and lithoidal volcanic tuffas. The marls and sandstones are partly lacustrine, partly marine. The many lakes around Rome, such as those of Albano and Nemi, are formed by craters of ancient volcanoes. In the vicinity of Modena there are many small *mud volcanoes*, called *salses*, which throw out salt water. These volcanoes give out carbonated hydrogen, which, sometimes catching fire, gives rise to the *natural fires* mentioned by travellers, of which there are examples at Velleja, Pietra Mala, and Barigazza. On the road between Rome and Naples, the first indication of volcanic action, after passing the Pontine Marshes, occurs a little to the south-west of Mola de Gaeta. We there find ourselves between two chains of hills,—that to our right, the Monte Massico, composed of Jura limestone; the other, on the left, of volcanic marls. The town of Sessa stands on volcanic tuffa. Several *coulées*, or streams of lava, which seem connected with the volcanic hill of Rocca Monfina, also occur near Sessa. Rocca Monfina retains the vestiges of the great crater from whence these coulées flowed. A few miles west of the Mola de Gaeta lie the *Ponza Islands*, four of which are composed of trachyte; in the fifth, Giannone, the trachyte overlies limestone.

Vesuvius.—The only active volcano in Italy is Vesuvius, which shoots up in a country

where the surrounding Neptunian strata belong to the tertiary class. It is composed of an older part, named Monte Somma, and the more modern Vesuvius properly so called. Somma is composed of alternating coulés, or streams of lava, and beds of volcanic tuffas, which are traversed by veins or dykes of lava. The modern part of the mountain is Vesuvius, exhibiting rocks of the same general description. The earliest recorded eruption of Vesuvius is that of 79, during which so vast a shower of ashes and scoriæ was thrown out, that the cities of Stabiæ, Pompeii, and Herculaneum, were covered up, indeed fairly buried, by it. Many eruptions have taken place since that period, and they still continue. In the country around Naples the land is by no means stable, as is proved by the submergence and emergence of the Temple of Serapis, near the town of Puzzuoli; and the rise of a new mountain, on the northern side of the bay, in the sixteenth century. Vesuvius had at that time been for a long interval tranquil, but a succession of earthquakes had taken place in the country for two years previously: at length, on the 28th of September, of the year 1538, flames broke out from the ground between Lake Avernus, Monte Barbaro, and the Solfatara, followed by several rents of the earth, from which water sprung, while the sea receded 200 feet from the shore, leaving it quite dry. At last, on the 29th, about two hours after sunset, there opened near the sea, a gulf, from which smoke, flames, pumice and other stones, and mud, were thrown up with the noise of thunder. In about two days the ejected masses formed a hill 413 feet high, and 8000 feet in circumference. The eruption finally ceased on the 3d of October. On this day the hill was accessible, and those who ascended it reported that they found a funnel-shaped opening on the summit—a crater a quarter of a mile in circumference. This hill, named *Monte Nuovo*, is composed of fragments of scoriform matter, or of a compact rock of an ash-gray colour, sometimes resembling trachyte, and at other times approaching to porphyry and calx.*

The nearest approach to the phenomena of Vesuvius is exhibited in a hill between Monte Nuovo and Puzzuoli, called the *Solfatara*, which, though considered an extinct volcano, is continually giving off gaseous exhalations mixed with aqueous vapour. The gases are sulphuretted hydrogen and muriatic acid. The rock of the hill is trachyte. A vast coulée of trachytic lava appears extending from the Solfatara to the sea, forming the promontory called the Monte Olibano, on the road between Naples and Puzzuoli. The whole of this stream rests upon the extensive formation which reaches from Puzzuoli to Cumæ, and appears to be continuous with the rock found in the immediate neighbourhood of Naples. This, which has long been known by the name of *Puzzuolana*, is a formation of volcanic tuffa. The height of the tuffa, in many places near Naples, is very considerable; the pile of the Camaldulo, the loftiest eminence next to Vesuvius in the whole country, is composed of it, and to the west of Naples it forms a sort of wall, so lofty and abrupt, that the former inhabitants of the country apparently found it easier to avail themselves of the soft and friable nature of the stone, and to cut through, than to make a road over it. This is the origin of the celebrated *Grotto of Posilippo;* a cavern 2178 feet in length, 50 feet in height, and 11 in breadth. The *Lake Agnano* occupies the crater of an old volcano. The famous *Grotto del Cane*, situated on its borders, is perpetually giving out carbonic acid gas, containing in combination much aqueous vapour, which is condensed by the coldness of the external air; thus proving the higher temperature of the place from whence it proceeded. The mouth of the cavern being rather more elevated than its interior, a stratum of carbonic acid goes on constantly accumulating at the bottom, but, upon rising above the level of its mouth, flows like so much water over the brim. Hence the upper part of the cavern is free from any noxious vapour; but the air of that below is so fully impregnated, that it proves speedily fatal to any animal that is immersed in it, as is shown to all strangers by the experiment with the dog. The *Lake of Avernus* may likewise have been the crater of a volcano. The Monte Barbaro is probably the most elevated volcanic hill on this side of Naples: it has a crater on its summit, and its great antiquity is shown by the circumstance of its surface being covered with verdure. The perfect condition of the crater of Astroni has caused it to be selected by the King of Naples as a preserve for his wild boars, and other animals destined for the chase: it is a circular cavity, nearly a mile in diameter, the walls of which are formed of a congeries of scoriæ, pumice, and other ejected materials. According to Breislac, the number of craters of which indications occur in the neighbourhood of Naples will amount to not less than 27; but we suspect the amount is much over-rated.

The middle and lower parts of the river district of the Po is formed of tertiary rocks more or less deeply covered with diluvium. The tertiary deposits are intermingled in a very interesting manner, on the southern foot of the Lombard Alps, with various trap rocks. These arrangements are best seen at the following places:—in the Val Nera, Val Ronca, Montecchio Maggiore, Monte Viale, and Monte Bolca. South of Padua lie the Euganean hills, an isolated tract of high ground, in the midst of a level tertiary country; consisting of a trachyte formation, not unlike that of Hungary, which, from its vesicular structure in some cases, and its semivitreous appearance in others, would at once be taken for a volcanic

* Daubeny.

product. The tertiary deposits contain remains of whales of extinct species, also of the elephant, rhinoceros, hippopotamus, &c.; and fossil animal remains of the same description occur more abundantly in the diluvium. Tertiary and diluvial deposits also extend from Ancona along the coast of the Adriatic, with but little interruption, to the extremity of the Peninsula.

Italian Islands.—Islands of Procida and Ischia. These islands are situated a short distance from Naples, and are entirely of volcanic formation. Procida consists of an alternation of beds of tuffa and of slaggy lava. Ischia is composed for the most part of a rock which seems to consist of finely comminuted pumice, re-aggregated so as to form a tuffa.

Lipari Islands. The Lipari Islands, between Naples and Sicily, are also composed of volcanic rocks. The island of *Stromboli* consists of a single conical mountain, having on one side of it several small craters, one of which is in a state of activity, the rest extinct. This volcano is remarkable, not for the intensity of its action, but for the circumstance of rarely enjoying periods of repose, no cessation in its operations having been observed from a period antecedent to the Christian era. Its action consists in ejections, repeated at very short intervals, of stones, scoriæ, and ashes, which either fall back within the crater, or are carried in another direction, according to the drift of the wind. The island abounds in volcanic tuffa, which is traversed by dikes of slaggy lava. The island of *Lipari* is remarkable for its splendid displays of the beautiful volcanic glass named *obsidian;* and for a profusion of pumice. The pumice of commerce is principally obtained in that island. Another isle of the Lipari group is *Volcano*, which appears, prior to the Christian era, to have been in a state of activity at least equal to that of Stromboli, and which still emits gaseous exhalations from the interior, as well as from several parts of the external surface of a crater situated in the highest part of the island. These vapours, acting upon the rock they penetrate, decompose it, and form with its constituents large quantities of *alum*, and other sulphuric salts. This island also affords a very rare substance, viz. the *boracic acid*, which lines the sides of the cavities in beautiful white silky crystals, and combined, it is said, with ammonia. *Sal ammonia* also occurs in this curious spot; and in a mixture of this salt with sulphur the substance named *selenium* has been detected. Close to Volcano is an isolated rock called *Volcanello*, which, though without a crater, emits from its crevices sulphureous vapours.

Corsica. The mountains of this island are principally primitive and transition, the rocks being granitic and ophiolitic. Their limit, ranging nearly from S. to N., passes near to, and to the west of the town of Corte. All that is to the west of this line is in general granitic, with subordinate rocks of porphyry, gneiss, mica slate, and limestone or marble. To the east of the same line, all the N. E. of the island is principally formed of talc slate, containing numerous subordinate beds of marble, euphotide, slate, &c. Jura limestone appears at the bottom of the Gulf of Saint Florent, and on the east coast, to the north of the Gulf of Porto Vecchio. No volcanoes occur in this island; and the ancient lavas mentioned by some authors are beds of euphotide. Hot springs, however, occur in Corsica; the principal ones being those of Orezza, St. Antonio di Guagno, and Fium' Orbo. The only mines are those of iron, copper, and antimony; and argentiferous galena is also met with, but in small quantity. Considerable deposits of diluvium occur in different parts of the island; and these, like other formations, are more or less deeply covered with alluvium.

Sardinia. The predominating formations in this island are primitive and transition; the rocks being granite, mica slate, clay slate, and limestone. On the north-western part of the island there is a considerable deposit of tertiary limestone, and one of much greater dimensions in the southern division. Trachyte and other volcanic rocks appear in connection with the tertiary deposits; and Mr. de la Marmora observed extinct volcanoes on various points, and principally in the chain of mountains which extends across from the canton of Marghine from Milis to Bollotana. All these districts, of igneous origin, exhale pestilential vapours, which may assist in explaining the remarkable unhealthiness of this island. Caves occur in the limestone; and these, with the rents that traverse it, contain, generally embedded in a kind of breccia, bones of various kinds of quadrupeds, some of living species, but the greater number of these animals appear to be extinct. Metals are rare; there are but feeble traces of silver, copper, and mercury. Many mines, however, of lead and iron occur.

Sicily. In this remarkable island the predominating rocks are tertiary, secondary, and volcanic; the older ones, or those of the primitive class, being less abundant. The primitive rocks are found at the north-east corner of the island, near Messina, where the prevailing kind appears to be gneiss. The transition constitute a chain of hills extending obliquely from Melazzo on the north coast, to Taormina on the east. They consist chiefly of mica slate, clay slate, with beds of glance coal, quartz rock, greywacke, sandstone, and limestone. Nearer than these is a great deposit of sandstone, with a few subordinate beds of marl and limestone, which occupies a great part of the central chain of the island, and extends along part of the northern coast. It first occurs to the east of Palermo, near the river Pilato, a few miles from Cefalu. It is older than the Jura or Apennine limestone. Resting apparently upon this sandstone is a formation of limestone and dolomite, composing the north-western part of the island, and which appears as the equivalent of the Jura or

Apennine limestone. Caves containing bones occur in it. Resting upon this formation is a deposit of marls and limestones, containing nummulites and hippurites, which appear to belong to the chalk and greensand of English geologists. Upon these rest a series of cretaceous limestones and marls of the older tertiary epoch. The fifth formation is an extensive tertiary limestone, found both north and south of the grand central range. Above this rests a still newer deposit of a conglomerate, containing shells of species now existing in the Mediterranean: it is well seen on the north coast, and to the south of Syracuse. Of the same age with this deposit is a bone breccia which forms beds lying upon the preceding, and also occurs in caves; and in both situations contains bones of the elephant, hippopotamus, and deer, with a few of a carnivorous animal of the genus Canis. Still newer than this bone conglomerate is a diluvial deposit; of which there are two kinds: the oldest occupies considerable heights, the newest covers the bottom of valleys. The tertiary rocks, so abundant in the island, contain beds of common salt, sulphur, gypsum, and alum, along with beautifully crystallised sulphate of strontites. Volcanic action appears to have been in operation from a very remote period in this island, as is evinced by the different sets of volcanic rocks which Etna affords. The oldest volcanic rocks of Etna are those in the Val di Bove, where there is a magnificent display of trachyte, porphyry, and tuffa: the next in point of age are the basaltic rocks; and the newest of all are the coulées or streams of modern lava, with their tuffas, ashes, sands, and scoriæ. The trachyte and basalt seem to have been produced before the commencement of the present order of things, the coulées, &c. are the matters which have flown within the period of human history, and which still continue. It is probable that this mountain was burning at a period antecedent to the time of Homer. At Macaluba, a hill near Girgenti, consisting of blue tertiary clay, there is a continual disengagement of carbonic acid and carbonated hydrogen, from small cavities, shaped like craters, which are filled with muddy water mixed with mineral oil. When the quantity of gas emitted is great, it throws up the mud to the height of 200 feet: these are called air volcanoes.

Sicily is not rich in metals: the mountains to the N.W. of Taormina present traces of a gold mine, said to have been worked at a very remote period. Some mines of silver, copper, lead, and iron are mentioned. Beds of sulphur occur abundantly in the blue tertiary clay; and though Sicily has long supplied Europe with that mineral, its stores are yet far from being exhausted. The blue clay also contains beds of rock salt: the most considerable are at Alimina, where this substance is found both massive and crystallised.

Malta and Gozo. These isles consist entirely of tertiary rocks, closely resembling those of the south-eastern part of Sicily. The most common rock is a fine-grained straw-coloured limestone, which is often so soft as to be worn down rapidly by the weather; but in other instances, it is sufficiently hard to form an excellent building stone, to which circumstance these islands have been in a great measure indebted for the elegance of the numerous churches and palaces which are seen in every town and village. Harder and more crystalline limestones are also met with, but all of them are nearly of the same colour. Both these islands are of trifling elevation; the highest point of Malta, which is one of the hills to the west of Cività Vecchia, being only 590 feet above the level of the sea.

Subsect. 2.—*Botany.*

"The garden of the world, fair Italy!
Thy very weeds are beautiful, thy waste
More rich than other climes' fertility."

Italy and Sicily.—These countries partake very considerably of the general character and aspect of the vegetation of the south of France; and the geographical distribution of the plants is well depicted by M. Mirbel.

The Sicilians cultivate, with more or less success, the Sugar-cane, the Custard-apple, the Date, &c. The different enclosures are surrounded by the Agave americana, which forms an impenetrable fence. By the side of the Plane, Poplar, and Willow, grow the Cactus Tuna, or Prickly Fig, the Orange, Citron, and Olive, the Myrtle (*fig.* 336.), Laurel, Carob-tree, and Pomegranate (*fig.* 337.); while Arbutus and Tamarisk abound upon the

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Myrtle.

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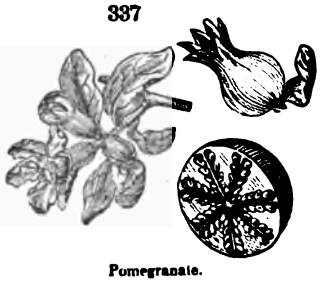

Pomegranate.

coasts. The Dates of the environs of Girgenti, situated on the southern coast, are said by Mirbel to be excellent; not so in the vicinity of Palermo, where the Date Palm is unknown except in gardens.

Of all the mountains of Sicily, Etna, whose enormous volcanic mass rises to the height of 10,870 feet, is the most celebrated. Its base, whose circuit exceeds 80 miles, exhibits all the fruit trees peculiar to the transition zone: higher up is the forest region. It is said that two or three centuries ago this region ascended to the very summit: however this may have been, it now ceases at a considerable distance from it. The most remarkable trees there are the Oak (*Quercus Robur*), the Beech, the Ash, Horse-chestnuts in the greatest abundance, and Plum-trees: higher up are woods of Birch. These last, which form the upper zone, are scanty on the southern side, and very numerous on that exposure of the mountain which looks towards the north. Beyond this region every thing green disappears, and the only shrub is Spartium etnense *Bivona*. Mount Etna has no perpetual snow, unless we so consider those masses which lodge in shaded crevices, and there resist the heat of summer, at an elevation of nearly 9000 feet.

It is well ascertained by geological facts, that Sicily and Italy once composed but a single continent, and that the mountains which cover so large a portion of the former, are but a continuation of the southern chain of the Apennines, which, interrupted by the Straits of Messina, re-appears in Calabria, and lifts its loftiest summits in the kingdom of Naples. Though some of these rise to 8000 feet, the snow nowhere remains permanently upon them. It is only in the southern part of Italy that the Apennines can boast of a rich vegetation; everywhere else, this chain is of an arid and sterile character.

The temperature of Calabria has much affinity with that of Sicily: its summers are intolerably hot, and frost is scarcely known during the winter. The numerous rivers and brooks which gush from the hills, abundant dews, and an astonishingly fertile soil, maintain, during almost all the year, in these favoured countries, a fresh and brilliant verdure. The plains, the slopes, and eminences, produce Olives, Tamarisk, Arbutus, Myrtle, Jujube, Pistachios of both kinds, and Oleander (only in dry beds of torrents), the Sweet Bay, and Carob, the Palmetto, Rhamnus, and Phillyrea; the Pinus Pinea or Stone Pine (*fig.* 338.)—the tree, whose picturesque outline and dark hue have recommended it so much to the artist, that it

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Stone Pine.

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Mulberry.

forms a striking feature in almost all Claude Lorraine's and Gaspar Poussin's celebrated Italian landscapes; Manna Ash, Chestnut, Mulberry (*fig.* 339.), Plane, Willow, Poplars, &c. In the warmer spots, there are large groves of Orange and Lemon trees; those of the vicinity of Reggio being most esteemed. In the fifteenth century, the cultivation of the Sugar-cane was carried on with spirit in Calabria, and even on the coasts of Samnium: now, the red and white mulberry, which are grown for the silkworms. The barren rocks are covered with Agave, Cactus, and Capers.

The portion of the Apennines which intersects Calabria is clothed from the base to the very summit with umbrageous forests of Oaks and Coniferous trees; especially consisting of the Common Oak, the Cork tree, the Quercus Cerris, Horse-chestnut, and Yew, the Larch and Wild Scotch Fir, with the Pinaster, &c

Most of the vegetable productions of Calabria follow the line of the coast, and adorn the shores of the bays of Naples and of Gaëta. The Orange and Lemon reach the Gulf of Genoa, but the climate refuses to perfect the Sugar-cane. The French tried in vain to naturalise it, during the period of their sway in Italy. Snow rarely falls in Naples; still, instances of its having been seen for a few days are not unknown. Judging by the state of

vegetation, the average heat at Naples is about one degree higher than at Rome. Winter begins in December; the first spring flowers are expanded by February; and in May the summer heats are already felt.

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Millet.

Throughout the country in general, besides Maize, and Millet (*fig.* 340.), here, as in all the warmer parts of the northern hemisphere, Rice (*fig.* 341.) is extensively cultivated, especially in low flat lands, where the fields can be temporarily inundated. This operation, as may be supposed, occasions much pestilential fever; so that, in many districts of Italy, laws are enacted prohibiting rice-grounds within the distance of five miles from the large towns. Arundo Donax (*fig.* 342.) is a gigantic grass, frequently in Italy, which seems to take the place of our Common Reed (A. Phragmites). Of the A. Donax, fences are made, also walking-canes, fishing-rods, and a variety of articles which require strength combined with lightness. The Caper (*fig.* 343.) of commerce, too, is an object of considerable value. It is the Capparis spinosa of Linnæus, the Cappai or Kappai of the Arabians. It grows upon old walls,

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Rice.

and in dry rocky situations. The buds of the flowers are gathered before expansion, put into vinegar, and, as is well known, are extensively employed in seasoning for various dishes.

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Arundo Donax.

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Caper.

There is a wide difference between the temperature of the more northerly and the southern provinces of Italy; owing as much to the increased height of the Apennines and their broader bases, as to the actual elevation of latitude. Beyond Samnium, the Orange and Lemon can no longer endure the climate. The plains of Abruzzo sometimes experience cold winters; and though the Oaks are seen on the sides of the mountains, they no longer reach their tops, and the Coniferous trees are as scarce here as they are abundant in Calabria. The Pinus Pumilio, which of all the genus is the one that grows at the greatest height, stops at 4800 feet; beyond it are only seen such shrubs, plants, and herbs as are peculiar to regions where the snow regularly falls during the whole winter.

The Olive tree, and its common accompaniments, reach to Rimini on the eastern coast, where the salt-marshes, perhaps, arrest its further progress equally with the colder temperature; on the western side it attains to the bases of the Pyrenees; and near Padua, in latitude 45°, and in sheltered spots about the lakes of Garda and Como, it also grows. At Verona, this tree is no longer seen: but the Pistachio, Pomegranate, Zizyphus vulgaris, Diospyros Lotos, Celtis australis, and Ostrya vulgaris, are in abundance.

SUBJECT. 3.—*Zoology.*

The zoology of Italy, the garden of Europe, is peculiarly interesting both to the classic traveller and the scientific naturalist: its rich and sunny plains, intersected by wooded hills, and backed by the noble chain of the Apennines, terminated only by the sea, present that diversity of temperature and situation so well suited to display a rich and varied assemblage of native animals. Hitherto this zoological field has been but imperfectly explored: hence it becomes extremely difficult, if not impossible, to give more than a slight and very general sketch of its leading peculiarities.

The native quadrupeds have never been particularly enumerated; but wolves are still found among the Apennines, and the wild boar is not unknown in the forests of Calabria. The buffalo was once employed as a beast of burden, but is now rarely if ever seen; nor can it be numbered among the native animals.

The ornithology of central Italy has very recently been ably illustrated by the Prince of Musignano (Ch. L. Bonaparte). Information from such a source is so highly valuable, as throwing so much light on the general distribution of the European birds, that we shall here introduce the results furnished by this eminent ornithologist.

The number of species discovered in the vicinity of Rome, and which probably includes nearly all those found in the States of the Church, amounts to 247: of these, 60 are also found in America; leaving 187 as exclusively belonging to the European fauna. The whole 247 species are arranged under the following heads:—stationary near Rome 43; permanent residents, but occasionally changing their station, 37; summer visiters, 40; winter visiters, 57; transitory visiters, 26; accidental visiters, or stragglers, 44.

The following list of Roman birds, unknown as natives of Britain, will materially illustrate the geographic ornithology of the two countries; those marked * have occasionally been found, as stragglers only, in the islands:—

Cathartes percnopterus,...	Slender-billed Vulture.
Falco nævius,.....	Rough-footed Eagle *Lath.*
Falco-brachydactylus, ...	Short-clawed Falcon.
—— Cenchris *Bonap.*	Little Kestrel.
—— rufipes *Tem.*.....	Rufous-thighed Falcon.
Strix Aluco, ...	
Pastor roseus,*.....	Rose-coloured Ousel.
Oriolus Galbula,*.....	Golden Oriole.
Coracias garrula,*.....	European Roller.
Cypselus melba,.....	Alpine Swift.
Muscicapa albicollis,.....	White-collared Flycatcher.
Lanius meridionalis,.....	Southern Shrike.
—— minor,.....	Italian Shrike.
—— rutilus,*.....	Woodchat.
Merula cyanea,.....	Blue Thrush.
—— saxatilis,.....	Rock Thrush.
Curruca turdoides *Sw.*	Thrush Sedgebird.
Sylvia ignicapilla,.....	Fire-crested Warbler.
Sylvia Cetti *Tem.*	Cetti's Warbler.
Sylvia melanocephala *Lath.*	Black-headed Warbler.
Sylvia cisticola *Tem.*.....	
Sylvia passerina *Tem.*	
—— Tithys* *Tem.*.....	
—— sibillatrix, ...	
—— rufa,.....	
Saxicola stapazina,.....	
—— aurita,.....	Golden Stonechat.
Anthus aquaticus,.....	Water Titlark.
Anthus rufescens,.....	Rufous Titlark.
—— arboreus *Bech.*.....	Wood Titlark.
Tichodroma Muraria, ...	Wall Creeper.
Upupa Epops,*.....	European Hoopoe.
Parus pendulinus,.....	Pendulous Titmouse.
Alauda Calandra,.....	
——cristata,.....	Crested Lark.
——brachydactyla,.....	Short-clawed Lark.
Emberiza cia,.....	
Fringilla cisalpina,.....	
—— Serinus,.....	
—— petronia,.....	
Perdix saxatilis *Tem.*	Rock Partridge.
Charadrius minor,.....	Little Plover.
Ciconia alba,.....	White Stork.
—— niger,.....	Black Stork.
Ardea purpurea,*.....	Purple Heron.
——ralloides *Scop.*.....	Rail Heron.
Ibis falcinellus, ...	European Ibis.
Numenius tenuirostris,....	Slender-billed Curlew.
Tringa subarquata, ...	
Totanus stagnatilis,.....	Pond Sandpiper.
Platalea leucorodia,.....	Spoonbill.
Phœnicopterus antiquorum,	Flamingo.
Sterna leucoptera,.....	White-winged Tern.
Anas leucocephala *Lath.* ..	
—— leucophthalmos *Tem.*	
Pelecanus Onocrotalus,....	White Pelican.

It must nevertheless be remembered, that this list, numerous as it is, exhibits but a partial statement of Italian ornithology; as the birds of the western and southern provinces, as Naples, Calabria, and Taranto, still remain to be investigated.

A brief notice of the most remarkable birds will satisfy the general reader: these appear to be the Slender-billed Vulture, the Rose-coloured Starling, the Blue Thrush, the Hoopoe, and the Wall Creeper.

The Slender-billed Vulture (*Cathartes percnopterus*) is near two feet and a quarter long: its principal food is carrion: hence the bill is not adapted for vigorous offence against living animals: the face is bare of feathers, while those on the neck are pointed. The general plumage is pure white, except the quill feathers, which are black. In Europe, this vulture is confined to the southern kingdoms, but is abundant in Egypt, where it is of essential use in devouring all putrid substances, which might otherwise infect the air. The Rose-coloured Starling (*Pastor roseus*) (*fig.* 344.) is one of the most elegant birds of Europe; it is about the size of a thrush. The general plumage is rosy; the wings, and a pendent crest on the head, are glossy black. This bird has occasionally been seen in Britain, and, although widely dispersed over the greater part of Europe, it is nowhere so plentiful as in Asiatic Russia. The Blue and Rock Thrushes are sweet songsters, and on that account are much

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Rose-coloured Starling.

prized, when in captivity, by the Italians. The Hoopoe is one of the common migratory birds; it usually arrives from the African coast very fat, and we can, from experience, state it to be delicious eating when cooked in the Italian mode. The Little Wall-creeper (*Tichodroma muraria*),with its crimson wings, is one of the rarest birds, but is occasionally seen on the lofty walls of St. Peter's Church.

Among the insects of Italy, the Tarantula Spider and the Silkworm are equally celebrated. So much of fable and exaggeration has been mixed up with the history of the first, that it is difficult to separate truth from falsehood: it is even doubtful whether any spider of a decidedly venomous character truly exists in the country. During a residence of many years in different states of Italy, we never met with one answering such a description; and it is well known that the common people give this name indiscriminately to every large spider they happen to meet with. Much more real danger may be apprehended from a species of true Scorpion, which is by no means uncommon in damp houses; and our own specimen (*fig.* 345.) we actually found one evening within our bed: its sting is venomous, and, we have heard, dangerous. May not the qualities of this insect have been exaggerated, and transferred to a spider? The Silkworm is too well known to require description. In some provinces, as Lower Calabria, &c., the insect is fed more upon the leaves of the red than on the white mulberry. It is not generally known that a species of true *Termites*, or White Ant, inhabits Sicily; it is found only in old houses: upon one occasion we discovered a nest established in a portmanteau of clothes, most of which had been destroyed by the perforated labyrinths of these destructive creatures.

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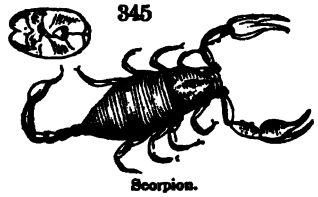

Scorpion.

The domestic animals are not very remarkable; the climate, from its heat, being ill adapted for grazing. The common breed of oxen are among the largest known, and are furnished with horns of an immense size; but the animals are gentle, and much used for draught: there is also another race, principally found in Tuscany, much smaller and esteemed for its fine form and pure white colour; and these are exported both to Cuba and Jamaica. The insufficiency of pasture accounts for the scarcity of sheep; and this is so remarkable, that in some of the distant provinces mutton is considered rather unwholesome, and is rarely, if ever, brought to market. During many years' residence in southern Italy, we never saw this meat exposed for sale; and in the island of Sicily, sheep are nearly unknown. In the southern provinces the cheese, butter, and milk are derived from goats, which are kept in flocks of 100 or 150: they are driven out in the morning by the goatherd, and conducted to their pens towards sunset. The pigs are all of the long-legged, unimproved breed, and no care is taken in their fattening.

Sicily. The zoology of Sicily has been hitherto so little known, that we shall take this opportunity of briefly illustrating its peculiarities. The following remarks have been the result of personal observations, made during a long residence in this celebrated island.

The native quadrupeds, in former times, appear to have been much more numerous than they are at present: this diminution has not originated in the increase of population or of agriculture, for both of these, it is well known, have enormously retrograded since the splendid epoch of Sicilian history. The diminution of the larger animals originates in two causes: first, the scarcity of wood and shelter; and, secondly, the universal passion for shooting. The ancient forests of Sicily, which once sheltered the larger game, have been gradually diminishing; and the next century may possibly witness their total disappearance. The only fuel burnt throughout the island is wood and charcoal. Now, a Sicilian landed proprietor never thinks of planting any other trees than vines or olives; to benefit his estate for the sake of those who are to inherit it afterwards, never enters his imagination. With such a constant and universal demand for fuel, and with no measures being taken to provide a future supply, it may therefore be easily imagined that wood is already scarce. The vast forests of Etna, of which so much has been said, and which originally belted that stupendous mountain, have been so diminished in modern times, that they hardly exist but in name. In these regions immense quantities of charcoal are made, and sent to all parts of the island. Trees are felled every day, but not one is ever planted; in short, even in 1815, after the British troops had been in the island ten years, wood began to be so scarce, that their rations of fuel were principally brought from the opposite shores of Calabria.

The scarcity of wild animals originates also in another cause: every Sicilian peasant carries his gun as constantly upon his shoulder, as he does his cap upon his head; and he shoots at every thing. With but little shelter for retreat, or for breeding, and perpetually exposed to destruction by the gun, it is not surprising that Sicily in general should be as remarkable for its paucity of resident birds and quadrupeds, as it is for its naked unwooded appearance. Its scenery is grand and magnificent; but everywhere it is deficient in wood and water.

In former times, it appears that several wild animals, now seldom if ever seen, were met

with in abundance. Authorities cited by Mongitore (*Sicilia Ricercata*, &c., 1742) show that the Wolf was always a scarce animal, and is now probably extinct. The Wild Boar was formerly common, and much hunted: and the earliest historians mention Porcupines (*fig.* 346.) or Spined Pigs (*porci spinosi, armati di spine*), as being wild in the forests of Etna: that this animal should not have been originally a native of Europe appears, therefore, highly improbable. Fazello, one of the earliest Sicilian writers, asserts that Fallow Deer (*Dama*) were found wild in abundance on the lofty mountainous chain of the Madonia (Nebrodes), and on that of Dinamare (Neptuni). From the latter, owing to its vicinity to Messina, both deer and forests have long since disappeared. We do not believe, indeed, that this noble animal is any longer wild in this island; but large herds are stated to exist in the woods of Mimiano, belonging to the Prince of Paterno and the Duke de Montalto, where they are preserved. The same authors mention the Stag as being particularly numerous, both on the sides of Etna and in the forests of the Nebrodes. Upon these latter mountains were also found numbers of Wild Goats, whose teeth were tinged with a golden hue, probably originating from the nature of some particular plant there abundant. Hares and Rabbits are now almost the only native quadrupeds to be met with: the latter are not common; and the former are stated to have been introduced in the island by Anassila, tyrant of Reggio. (*Mong., Sic. Ric.*, vol. i. p. 283.)

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Porcupine.

Among the birds of Sicily must be reckoned many species common to the opposite shores of Africa; these are principally of the wading tribe. The swampy lakes and inaccessible morasses of Leontini and Syracuse afford shelter to vast flocks of waterfowl, which arrive during the spring and autumnal migration. The *malaria*, a most virulent and fatal species of ague, engendered by these low lands, renders them almost uninhabitable during the greater part of the year, and is a sure protection to the birds themselves. The immense flocks of quails (*fig.* 347.) which pass by the way of Sicily to the northern parts of Italy, during the month of April, is almost incredible: it is no uncommon thing for a good sportsman, with one dog, to bag from fifty to sixty brace the first day after their arrival. Bee-eaters, orioles, rollers, hoopoes are then common over every part of the island, and are pursued by numerous hawks and owls; but the whole disappear towards the beginning of May. The African Flamingo is not an uncommon bird in the solitary marshes of Syracuse; where the Pelican also is an occasional visiter. The beautiful Purple Heron, the Night Heron, the Little Bittern, the Long-legged Plover, the Glossy Ibis, the Pranticole, and several other rare European species, are among the common migratory visiters, and give to the ornithology of Sicily an interest which it would not otherwise possess.

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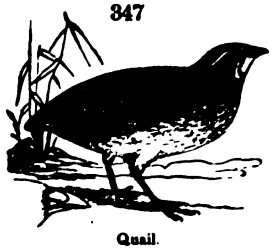

Quail.

The insects of Sicily are more numerous than might be expected from the bare and unsheltered nature of its surface. The character of its entomology is decidedly more allied to that of northern Africa than of central Europe. All those genera which delight in a hot, sandy soil are particularly numerous: as Scarabæus (*Mac Leay*) Trox, Pimelia, Scarites, Gryllus, Sphex, Amphicoma, Bembex, Chrysis, Osmia, &c. Sicily is very rich in hymenopterous insects; and of the genus Anthrax, or Sand Flies, we discovered near thirty species in the vicinity of Messina alone.

The Butterflies (*Papilionidæ*) are numerous, and comprise the most elegant species known in Europe. Podalirius europæus *Sw.*, Gonepteryx Cleopatra, Eurymus hyale *Sw.* (*fig.* 348.), P. Daplidice, A. Lathonia, &c. are common. Africa imparts to Sicily one of her most superb and imposing butterflies in the rare *P. Jasius*, *Jasia europæa* Sw., which we have occasionally captured near Messina.

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Eurymus Hyale.

Flights of devastating Locusts, unknown to the other parts of Europe, have occasionally afflicted this fruitful island. The earliest upon record is mentioned by Fazello, who says that (about the 15th of May, 1355) the heavens were darkened by vast clouds of locusts coming from Africa; that they spread over the island, and began to make all verdure disappear; but that a sudden change of wind taking place, as if by miracle, they departed in dense squadrons, and were driven into the Ionian Sea, where their bodies being cast upon the shore, caused such putrefaction, that a grievous plague ensued.

More recent flights of locusts appeared in 1637, and in the four years following 1656; also in 1687, 1688, and 1689. But the most destructive appears to have been that of 1708

These terrific insects, as Mongitore relates, first landed at Sicli; from whence, spreading themselves in vast armies over the whole island, they caused devastation and ruin, during the five following years. In modern times the island has happily been spared from this scourge.

Malta and Gozo. The animals of Malta and Gozo, as may be expected, are few; yet, as we can write from personal knowledge, a few notes on the zoology of these detached islands, should not be neglected. Of native wild quadrupeds, we believe, there are none larger than a rabbit. During the spring and autumnal migration, Quails, for a short time, are in great abundance, and the beautiful Merops, the Golden Oriole (*fig.* 349.), and the elegant crested Hoopoe, are sometimes to be met with in the market. The large bird called the Maltese Vulture must be expunged from our systems, being no other than the Alpine Vulture (*Cathartes percnopterus* Tem.) in a young state: it was probably a straggler from Africa, or the lofty mountains of Sicily; for these birds could find no permanent habitation or shelter in the flat cultivated tableland of Malta. The little island of Lampidosa is remarkable for being the habitual residence of the most elegant of European birds, and one, also, which has never been recorded as such: this is the Coronated Crane, or L'Oiseau Royal of the French (*Ardea pavonia* Lin.): several of these were captured in 1812, at Lampidosa, and brought to Malta alive. To this solitary and nearly uninhabited island the Flamingo and many other wading birds of Africa occasionally resort.

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Golden Oriole.

The fish are in great variety, and at all times afford a plentiful supply for the table: yet the species are, for the most part, similar to those of Sicily. The inhabitants, being Catholics, consume great quantities of shell-fish. The oyster is, indeed, unknown; but the harbour and coasts round La Valetta supply abundance of *Murex truncalus* (*fig.* 350. *a*), *M. brandanus* (*b*), both much better tasted than our whelks. Immense quantities of the *Lithodomus dactylus*, or Boring Muscle (*c*), are annually consumed. Indeed, the whole island, from its geological nature, is but a vast *nidus* for this singular shell-fish, which perforates the soft rock, below the water, with the smoothness and regularity of an auger. In the still inlets and recesses of the creeks and harbours, may be found a great variety of radiated Mollusca, which, from the pellucid nature of the water, may be clearly discerned at a depth of eight or even ten feet.

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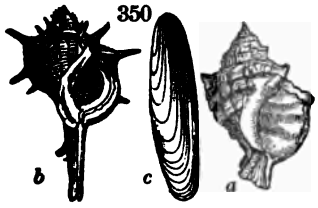

a, Murex Truncalus. *b*, Murex Brandanus. *c*, Lithodomus Dactylus.

The domesticated animals, and the uses they are applied to, excite the attention of travellers, on first visiting the island. The oxen are large, and have enormous horns, being the same breed as that of Sicily: all the heavy draught work is performed by them, both in town and country. The horses are mostly imported from Barbary; and the breed of asses is not inferior to that of Spain. The mule is universally employed for lighter purposes; and the old Maltese families still adhere to the ancient custom of using them in carriages, in preference to horses. Cows are rarely seen, the artificial soil being too valuable for agriculture; but goats abound, as they thrive on the scanty herbage of the rocks, and supply all the milk and fresh butter which are required. Sheep may be considered a curiosity both in Sicily and Malta; for mutton is rarely seen, even at the highest tables. The Maltese dog is nearly extinct, the common breed being more like the pointer, and half spaniel. Rats are so large and numerous, that, during the famous siege of Valetta, they became delicious food to the starving Maltese, and sold at a high price.

Sect. III.—*Historical Geography.*

The history of Italy is unrivalled in the magnitude of its events, and their influence upon the general destinies of the world. Our limits and plan can allow only a very hasty sketch of the mighty revolutions of which this country has been the centre.

Of the early nations of Italy but little is known. The Etruscans, by the works of art handed down by them, especially in the form of terracottas, appear to have been a civilised as well as a powerful and free people. The south, colonised from Greece, and even denominated Magna Græcia, was the seat of the most celebrated of the early schools of science: Pythagoras taught at Crotona; and the Samnites, by their gallant resistance to Pyrrhus, and afterwards to the Romans, established their name as a military nation.

Rome sprung up amid these nations rather as a band of refugees than as a regular state. The Romans then subjected, one after another, first the neighbouring tribes, then the whole of Italy; and afterwards crossed the seas, to conquer all the known world. Among their high and energetic virtues, and daring exploits, they retained still a character of rudeness: and the first influence of their conquests was to extinguish in the subject nations the degree

of civilisation they already possessed. Etruria lost her early arts, and Carthage that immense commerce which embraced all the known seas of the globe. But as the hardy captains of Rome penetrated to the cities of Greece, and saw the matchless works of architecture and sculpture with which they were embellished, their rugged pride was softened, and they were smitten with the love of these beautiful arts. The orators of the Forum sought next to transfer the splendid powers of eloquence which had given dignity and splendour to Athens. At last, Cicero undertook to transplant the Grecian philosophy. Unfortunately, at the same time, the chiefs who returned laden with the spoils of so many nations, introduced an unbounded luxury, which vitiated altogether the truth and simplicity of ancient manners.

The empire of Rome, the most extensive and opulent ever established, was, after dreadful convulsions, erected on the mighty ruins of the senate and the republic; and the world became, as it were, the inheritance of a single man. On such a trying and perilous eminence, examples were presented of the most unbounded cruelty and dissoluteness; yet also of the most wise and enlightened humanity. During the Augustan age, poetry and all the fine arts were patronised and cultivated with ardour, after the Grecian model, and carried almost to an equal pitch of perfection. The oppressive sway, however, of successive tyrants, and the brutal license of the prætorian guards, soon left little more than that barbarous voluptuousness which generally characterises a purely despotic government.

The decline of the Roman empire was attended with calamities to Italy and to mankind, still more dreadful than those with which its rise had been attended. The barbarians of the north and east of Europe, allured by the reported wealth and weakness of the empire, pressed continually closer on its frontier. They were kept in check for some time by the Danube and the Alps, and by the remaining strength of the legions. At length they burst all these barriers, and ravaged the beautiful plains of Italy. The transference to the East of the seat of empire left this portion with an unequal share of the common defence. Rome itself, the imperial capital of the world, became the prey of barbarians; it was successively sacked by the Goths under Alaric, and the Vandals under Genseric.

The sceptre was snatched from the feeble hand of Augustulus, and the western empire was extinguished. The kingdom felt a gleam of reviving prosperity under Theodoric the Ostrogoth and Theodosius the Great, but was soon overwhelmed by fresh swarms of barbarians, among whom the Lombards were the most conspicuous, and have given their name to the northern plain watered by the Po.

The empire of Charlemagne suspended the troubles of Italy, but formed the commencement of that long series of ultramontane dominion to which she has been subjected. When the members of that empire, France and Germany, separated from each other, Italy fell to the lot of Germany, which retained the imperial name and dignity, but ever afterwards found this country a turbulent and precarious appanage.

The spiritual authority of the Popes formed a new species of empire, which seemed to invest Rome with a grandeur almost equal to that which she had displayed under the Cæsars. After a gradual progress, it rose under Gregory VII., to such a height that Henry IV., the most able and powerful prince of his time, was fain to present himself bareheaded and barefooted, and on his knees implore forgiveness for having ventured to dispute the spiritual authority. From this time these proud pontiffs not only claimed the right of disposing absolutely, throughout the Christian world, of all the officers and ministers of religion, and of exacting from it the regular tribute of "Peter's pence," but even of excommunicating and deposing the greatest kings. As the emperors, however, did not tamely submit to these usurpations from a power which they considered in a temporal sense as subordinate, a series of struggles ensued, which scandalised the church, and distracted Europe.

The rise of the commercial republics, Venice, Genoa, and Florence, formed a brilliant era for Italy, enabling her almost to equal the most splendid ages of antiquity. Their navies, both for war and commerce, covered the seas, and set bounds to the all-grasping ambition of the Ottoman, which threatened to overwhelm the whole western world. By degrees, also, the lamp of learning, which had shed for ages only a dim light over Europe, broke forth here into full effulgence. The remains of Greek literature were conveyed over by the learned men who fled before the sword of the Turks; the writings of the ancients were drawn from the depth of convents, and eagerly studied and circulated. What was of more consequence, a race of enlightened princes and nobles arose, who sought glory in patronising knowledge, while a general taste for it was diffused among a wealthy and refined community. The arts of painting, architecture, and music, on which the wealth of the noble citizens was lavishly expended, rose to an eminence equalling, perhaps, that of the ancients, and surpassing that of any other modern nation.

The decline and degradation of Italy rapidly ensued after this brilliant era. Her great republics lost the liberty which had rendered them so flourishing; their arts and commerce were transferred to the northern maritime states. The great monarchial powers, after long struggles, reduced her territory to a state either of subjection or vassalage; while they con-

tinued at the same time to make her soil one of the great theatres of contention. Italy had reason more and more to deplore "her fatal gift of beauty," which became so fruitful a "source of present woes and past;" she was branded even with the appellation of "slave of slavés." Rome herself lost her spiritual greatness, which was withered even in Catholic countries by the progress of reformation. The late revolutions of Europe, though they produced in Italy many eventful scenes, can scarcely be considered as forming an era in her destiny. They had only the effect of sealing her degradation by extinguishing what remained of the independence of her once great republics, Venice and Genoa. The Italians are said to regret the lost name of the kingdom of Italy given by Bonaparte to the northern districts, though accompanied not with any portion of political freedom, but with some beneficial regulations of law and police. In general a great body of the Italian people manifest a deep sense of the fallen state of their country, and an eager desire to seize any favourable occasion to revive its ancient glories; but as yet the iron hand of Austrian military power has crushed in the bud every tendency of this nature.

Sect. IV.—*Political Geography.*

The political state of Italy presents nothing on which the well-wishers of that country can look with much satisfaction. It is chiefly divided among five potentates: the Emperor of Austria, who holds Lombardy and Venice, to which may be added Parma and Placentia, the appanage of Maria-Louisa; the king of Sardinia, who has Piedmont, Savoy, and Genoa; the Grand Duke of Tuscany; the Pope, temporal ruler of the States of the Church; the King of Naples and Sicily. Beside these, the Duchies of Modena and Lucca, the principality of Monaco, and the republic of San Marino, form separate, though they hardly deserve the name of independent, states. The constitutions of all these sovereignties possess an unhappy simplicity; the will of the ruler operating unchecked by any legal or constitutional limit. Neither the great civic nobles of the commercial states, nor the feudal nobility of the country, have any effective influence in the administration. They only exercise, by their immense fortunes, a pernicious influence in checking the operations of police, throwing the public burdens on the industrious classes, and depriving them of the just protection of the laws. The police over all Lower Italy is in the most imperfect state. Bands of almost licensed robbers occupy the mountain districts, and make frequent inroads into the plain; thus rendering a great part of their territory unfit for the residence of the cultivator.

The only tie between the separate governments of which Italy is composed consists in the paramount influence of Austria; the power of all others which sets itself in the most fixed opposition to political reform. The Emperor of Austria has his brother Grand Duke of Tuscany, his father-in-law King of Naples, one of his daughters Duchess of Parma and Placentia, and the family of Sardinia bound to him by close ties of consanguinity. What is of more consequence, his troops also are in a position to overcome any one of them which should adopt measures contrary to the views of this high potentate. Being otherwise unconnected with each other, and none of them powers of the first rank, they present no political features which may not be exhibited in describing the local divisions of Italy.

Sect. V.—*Productive Industry.*

The productive wealth of Italy has suffered greatly in the decline of her other sources of prosperity. Yet such is the felicity of her soil and climate, and so considerable are the remains of her industry, that the entire produce of her land and labour is still ample and valuable.

Agriculture, as Smith has observed, is one of those plants which take such deep root, that only extreme tyranny and misrule, and scarcely even these, can eradicate them. Italy is now dependent upon other countries for the superb fabrics with which she formerly supplied them; her ships no longer cover the Mediterranean; her merchants, who were once her nobles and her princes, retain only the shadow of mighty names. But the plains of the Po, the Arno, and the Garigliano are still cultivated like gardens; and the agricultural produce, after supplying a very dense population, affords a large surplus for export.

Culture in Italy is conducted by a class of farmers to whom we have nothing analogous in our part of the world. The stock is furnished half by the landlord, and half by the tenant; and the produce is equally divided between them. The lease is only from year to year; but a tenant who pays his rent, and does not give any serious offence, is never removed; Mr. Forsyth considers the productiveness as being invariably in proportion to the smallness of the property; the cause of which probably is, that, under a system of management where the landlord co-operates, the part of those holding large estates committed to stewards and substitutes is commonly very ill done, and their avidity for money shows itself only in extortion. The property of the great ecclesiastical nobles of Rome has thus been converted into a pestilential desert. In Lombardy and Tuscany, however, the mercantile intelligence of the opulent owners has been employed in important rural improvements; the wealth of these districts is chiefly due to the astonishing works constructed at an early period for the purpose of irrigation. Several of them were executed at periods prior to the era of authentic

record; others in the twelfth, thirteenth, and fourteen centuries. The aqueducts, sluices, and other works connected with them, are still the admiration of engineers. They are now so divided and subdivided, as to convey the means of irrigation almost into every field; and in this southern clime, where nothing almost but water is wanted, the increase of fertility is almost incredible. The produce is sometimes more than tripled; and grass may be mown three, four, and five times in the year. The property of water, thus the grand instrument of cultivation, is fixed and distributed by the minutest regulations. Every spring newly discovered belongs to the proprietor of the ground, and is by him immediately converted into a little canal. The enclosures are small, and surrounded, for the sake of shade, by poplars and mulberry trees, which give the country a rich wooded appearance. The farm-steadings are kept very neat and clean. In the Tuscan vale of the Arno, the irrigating system is practised on a different and still more elaborate method. The steeps of the Apennine, from which the waters poured down only in irregular torrents, seemed incompatible with such a process. Recourse was had to the terrace system, which, though not uncommon in Asia, is in Europe almost exclusively Italian. The processes by which level spots have been formed on the sides of the steepest mountains, naked rocks covered with earth, torrents confined within walls, and guided in little canals along almost every field, could only have been effected by the Florentine merchants in their greatest prosperity. The people of the present age with difficulty support the heavy expenses of repairing and keeping up these most useful works. The cultivation of Naples does not require such elaborate processes. All that is there wanted is shade, which is procured by dividing the country into very small fields less than an acre, and planting each side with high trees, round which vines are trained. The land is almost entirely tilled with the spade; but the poor cultivator is obliged to give two-thirds, instead of one-half, to the proprietor. The Neapolitan Apennine is not cultivated with the same elaborate care as the Tuscan; but nature profusely covers it with the chestnut and the olive. An entirely different system prevails in the great *maremmas* or plains along the sea-coast, which, from some cause not fully ascertained, are filled at a certain season with air so pestilential, that human beings cannot remain for any length of time without the loss of health, and even of life. These wide plains, surrounding the greatest cities of Italy, present a scene of the most dreary desolation, and are covered merely with wandering herds, watched by a few mounted shepherds, who, however habituated to the climate, labour under constant debility. Once in about six years each spot is brought under the plough, for which purpose numerous bodies of labourers are brought from Rome and Sienna; and sometimes a hundred ploughs are employed at once, in order to get over as soon as possible this dangerous operation. The farmers are few in number, not more than eighty in the whole Roman state. They reside constantly in the cities, have large capitals, and long leases; and some of them have live stock worth $75,000.

The objects of agriculture in Italy are numerous and important. They include grain of all the most valuable descriptions. The wheat of Sicily, and still more of Sardinia, is reckoned the finest in Europe. Maize is a prevalent grain, chiefly for the food of the lower orders; and even rice is raised with success, and to a considerable extent, in the inundated tracts of Lombardy. Silk is an universal staple, and of very fine quality. The export of it, in a raw or thrown state, since the decline of internal manufactures, has been the main basis of Italian commerce: it is sent to all the manufacturing countries, and shares with that of China and Bengal the market of Britain. The vine finds almost everywhere a favourable situation, and is cultivated: but the juice no longer preserves the fame of the ancient Falernian. It is in general too sweet, and too imperfectly fermented, to admit of exportation. Mr. Eustace endeavours to turn this circumstance to the honour of the national character, conceiving that the sober Italian, who drinks to quench thirst, has no motive to study the preparation of a delicate wine. The wines of Naples and Sicily are the best, and are sometimes seen at the tables of the great in foreign countries. The Muscatel and other Sicilian wines are so extremely luscious, that only one or two glasses can be taken at a time. That island, however, has another kind, the Marsala, often sent to America and the West Indies, where it passes for Madeira. The olive grows in very great luxuriance in Naples, on the eastern slope of the Apennines; and the oil made from it is more highly esteemed than any other, at least for use in the finer woollen manufactures, whence it finds in England a steady demand, under the name of Gallipoli. Cattle are not particularly numerous; but many of them, from their qualities, are singularly valuable. Pre-eminent among these are the cows fed in the pastures of the Parmesan, and the country around Lodi, which produce the cheese considered superior in richness and flavour to any other in the world. The cattle are of the Hungarian breed, crossed with the Swiss; they are fed in the stall upon mown grass; and numbers of the small proprietors keep a dairy in common, that they may conduct the process on a large scale. The cattle on the Apennines are of a small gray kind, which Mrs. Graham praises as the most beautiful of their species; but they give little milk, and after being employed in labour are driven down to the Maremma to be fattened for the city markets. The sheep abound in all the mountainous districts, and their wool is generally esteemed. That of the Venetian hills has, by crossing with the merino, been rendered

almost perfect; and that of the mountains of Rome and Naples, though not so fine, is valued for the equality of its texture. A great part is black, and woven undyed, for the clothing of the galley-slaves and of the friars. Goats are reared in great numbers amid the Apennine cliffs; and their flesh and milk is the animal food chiefly used by the cultivators, with the addition, however, of fresh pork. Hogs are reared also in great perfection: they are not pent up, and fed on refuse, but wander at large through the woods, where they feed on nuts, mast, and roots; and become even somewhat intelligent and sprightly animals. The hams and bacon thus produced are considered at Rome as a great luxury. The fruits of Italy are various and delicious, but none are of such value as the chestnuts, which in the upper regions constitute the food of a numerous body of mountaineers, who even dry and convert them into bread. The Apennine timber, consisting chiefly of oak and chestnut, is little used except for barrels. The saline plants of Sicily yield a barilla which rivals that of Spain. Among partial objects we may mention cotton in the southern provinces of Naples, which was produced in 1812, to the amount of 60,000 bales, and the hemp of Bologna, which is of peculiar excellence. The Neapolitan manna, which exudes from a species of ash, is made a royal monopoly.

The manufactures in Italy, once remarkable for their elegance and variety, are now everywhere in a state of decay, and present only specimens on a small scale of what formerly existed. The great and opulent citizens, after the military revolutions which deprived them of influence and security, seem everywhere to have retired to the country, and invested their capitals in land. Silk was formerly the grand staple, particularly in the form of velvets and damasks, richly adorned with gold and silver embroidery. This manufacture still exists in most of the great cities, though on a reduced scale. The Venetian States, in 1795, had only 2701 silk weavers, and 1163 gold and silver spinners. In 1802, the number of weavers in Turin had been reduced from 1400 to 500. The Lombard peasantry, however, still carry on the throwing of silk upon their farms, and it is exported in the shape of organzine for the use of the foreign manufacturer. The woollen manufactures of Florence were once immense, giving employment to 30,000 persons; but they are now both few and coarse. Linen is considerable, and is often combined with cotton, which flourishes tolerably in the southern provinces of Naples, where the muslins of Tarento enjoy a good deal of reputation. Glass, in brilliant and curious forms, was once a celebrated and admired article; and there are still made at Venice, on the island of Murano, mirrors, glass beads, and tubes; at Florence, the flasks bearing the name of that city. It seems doubtful if the art that produced the ancient earthenware of Etruria still exist. In the Florentine and Roman states are made, without the use of the wheel, numerous jars of red earthenware for holding oil; probably on a very antique model. The works of Doccia, near Florence, produce goods resembling those of Staffordshire. The only fine porcelain of Italy is that made at Naples, which may vie with any in Europe. The potteries at Terramo, in the Abruzzo, are also very extensive. Some curious works, inlaid agate tables, cameos, mosaics, &c., which elsewhere rank with the fine arts, are carried to such an extent, at Florence and Rome, as to be articles of trade. The paper of Italy had formerly a high reputation; and that of Belluno, and some parts of Tuscany, is still in repute. Extremely fine soap is made generally throughout Italy, but more particularly in Sicily. We must not omit the Tuscan manufacture of straw hats, which affords a most valuable employment to the country girls in that neighbourhood, and yields a produce of about $625,000 a year. In general, Italian statistics are in so low a state, as to make it scarcely possible even to conjecture the amount of these various articles.

Minerals, especially metals, are deficient to a degree remarkable for a country so very mountainous. The Alps, which are so rich on the side of Germany, produce on that of Italy only iron in the districts of Brescia and Bergamo, and copper in that of Belluno. The Brescian iron has been worked with considerable diligence, being formed into the steel celebrated under the name of Brescian, and into various descriptions of hardware, which, however, have shared the general decline of Italian industry. Notwithstanding the boasts of some native writers, no mines of importance seem to exist in any part of the Apennines, or of the rest of Italy, except the island of Elba, long celebrated for its fine iron. The cliffs of this great calcareous chain, however, produce valuable stone, and particularly several species of beautiful marble, among which that of Carrara is conspicuous; nor are there wanting agates and other ornamental stones. The sulphur of Sicily is an article of importance.

The mercantile transactions of Italy have declined in a still more remarkable degree. The discovery of America, and the passage to India by the Cape of Good Hope, transferred the most valuable trade of the world into channels from which she was excluded. The restrictive, and, in many respects, oppressive system, adopted by the Spanish and German princes, chilled the spirit of enterprise; and the great capitalists of Venice and Genoa preferred investing their money at high interest in foreign funds. The only great commercial activity now existing is at Leghorn, which carries on not only the commerce of Tuscany, but that of Naples and Sicily, and keeps even a regular dépôt of all the commodities of the Levant. Mr. Jackson reproaches the English as acting against both their honour and in-

terest in receiving these goods at third or fourth hand, and at an advance of 35 per cent., from traders who make it a religious duty to cheat the infidels; but the merchants find, probably, an extreme convenience in having one port where they can make up a complete assortment of Mediterranean goods. The exports from Italy consist almost entirely of the articles of raw produce already enumerated, of which the leading articles are raw and thrown silk, and olive oil; to which may be added Parmesan cheese; marble; almonds, and raisins, from Sicily and Lipari; Bologna hemp, barilla, sulphur, liquorice, paste, straw hats, and a great quantity of rags. The staple import is salt-fish for the use of the devotees during the fasts of the church. It is chiefly cod-fish from Newfoundland, called here *bacallo*, and pilchards from Cornwall. All kinds of colonial produce and spices find a market; also iron, lead, hardware, silks, woollen, and, still more, cottons from France and Britain. Leghorn also imports wheat from Odessa, beans from Egypt; the fruits, cotton, and drugs of the Levant; but more for the accommodation of Britain and the other northern nations than for the use of the country.

Fishing is a pursuit for which the extensive coasts of Italy, as well as its lakes and rivers, furnish ample scope, as they abound with fish of the most excellent quality. It is carried on with sufficient diligence for immediate consumption, but not so as either to furnish objects of trade, or to dispense with a large importation. Anchovies, however, are shipped in large quantities from Sicily for Leghorn; and it seems to be from some defect in the mode of cure that they do not equal the Gorgona anchovies. On the western coast of the same island is a considerable coral fishery. Amber, as a marine production, may also be mentioned as found more abundantly on the Sicilian than on any other coast. The tunny fishery of Sardinia is the most extensive in the Mediterranean.

The canals, constructed during the period of the glory of Italy, are very numerous and valuable. The plain of Lombardy is intersected by twelve on a large scale, connected by innumerable minor channels. But though many of these are navigable, their primary object has been to communicate to the country on both banks of the Po its unrivalled fertility. This is still more decidedly the case in the Florentine canals, which are merely broad ditches cut along the terraced sides of the mountains. The only canals of the south appear to be those which have been formed at different times with a view to the draining of the Pontine marshes. Commercial canals do not seem to have yet entered into the system of Italian economy.

The roads of Italy were carried to the highest perfection under the ancient Roman empire and republic. From Rome, as a centre, five great ways branched off to the different frontiers. All obstacles were removed, rocks levelled, hollows arched over, in order to form routes the most direct, level, and commodious. They were constructed in a peculiar manner with large blocks of stone wedged together so as almost to resemble a flat surface of rock; and such is the durability thus produced, that several large portions remain, after the lapse of two thousand years, in as entire a state as at their first formation. The lines of these great roads still continue, and are kept by the existing governments in very tolerable condition; so that travelling in Italy is obstructed only by the occasional inundations of the rivers, and the still more perilous assaults of banditti, who occupy many of the Apennine recesses.

SECT. VI.—*Civil and Social State.*

The national character and the state of society in Italy are marked by prominent and striking features. The people, in some respects, are perhaps the most polished and refined of any in the world. While the German and many English nobles placed their enjoyment in hunting and the pleasures of the table, music, painting, poetry, and assemblies for conversation, formed the delight of the Italians. The one spends much of his fortune in keeping a splendid table, stud, and pack of hounds; the other in building palaces, and adorning them with masterpieces of painting and sculpture. The French are, perhaps, still more gay and social; but their gaiety is more of a noisy, empty, and animal kind; while the Italian derives his delight from objects of taste, and feels them with deeper sensibility. The nobles of this country were from the first civic; and all their habits have continued to be those of a city. What they call the chase, has no resemblance to the bold adventurous field-sports of England, but consists merely in driving a number of animals into an enclosed place, and shooting them at their ease. No pains are bestowed on the improvement of their estates, which are managed according to a mechanical routine, under the care of stewards, who often embezzle a great part of the produce. Being excluded also from all concern in public affairs, and from the administration of the state, they have become estranged from habits of manly and energetic exertion. They pass their lives in a listless and lounging apathy, making it their sole object to while away the hour in the most easy and agreeable manner. Their day is spent in a regular routine of attendance on mass, on their lady, on the theatre, the Casino, and the Corso. As the title and rank of a noble descend to all his posterity, the great increase in their number, by reducing them to a miserable and proud poverty, tends still more to degrade them in the public eye. Ostentatious magnificence is combined

with sordid economy; the most superb equipages and apartments are let out to foreigners, who are not even quite sure of honest dealing. Attached to many of the Florentine palaces is a little shop, where wine is retailed in the smallest quantities. But the deepest reproach of Italian manners seems to be the established system of cicisbeism, by which every married lady must have her lover or *cavaliere servente*, who imposes on himself the duty, wherever she is or goes, to dangle after her as her devoted slave. This connection is said to be not decidedly, or at least certainly, criminal, as our manners would lead us to suppose; but rather to form an *état* into which it is necessary to enter, on pain of expulsion from the fashionable circles, and which is continued according to a routine of almost mechanical observance; the gallant speaking not of the mistress whom he loves, but of her whom he serves. It is obvious, however, that it must, at the very least, imply the sacrifice of all that is happy or respectable in domestic life, attended as it is with an anathema against the married pair, if they show the slightest symptoms of respect or regard for each other. Still, charity and humanity appear conspicuous virtues in these nobles. The *misericordia*, an institution diffused throughout Tuscany, consists in Florence of four hundred persons, many of high rank, who devote themselves to personal attendance on the sick, superintending the hospitals, distributing food to the patients, and watching the manner in which they are treated. These duties, indeed, they perform under the disguise of long black vestments, which cover and conceal the face. There is another society for searching out and relieving the poor who have seen better days, and are ashamed to beg: but in Mr. Forsyth's time their zeal had so far relaxed, that they bestowed alms only upon application; and Mr. Williams considers their original object as wholly lost sight of. The charitable institutions of Naples, Rome, Milan, and Genoa, appear also to be most extensive; and the bounty bestowed, especially at the convents, is considered as one of the chief causes of the idleness and mendicity which prevail in the great cities. Temperance must be admitted as another virtue of the Italians. Notwithstanding the abundance and cheapness of wine, intoxication is scarcely known, even among the lowest ranks. English visiters complain that, amid the profusion of other forms of courtesy, little food or drink is vouchsafed to them, even by the most opulent. A dinner is an event of the rarest occurrence; and the amusements of the evening are only those of intellect or society, without any refreshment whatever. The accompaniment of real politeness and civility, however, shows that this proceeds not from want of hospitable feelings, but of that importance which is attached to good cheer by the English nation.

The lower ranks form the mass of the Italian population, with scarcely any intervening class between them and the nobles. They share, in some degree, the refined tastes and manners of the higher ranks. The common shopkeepers of Florence and Rome possess a taste in the fine arts, and sometimes even in poetry, which is unknown in the most polished circles beyond the Alps. They delight also in conversation, which they support with peculiar animation, and with gesticulations the most varied and expressive of any European people. The peasantry are, on the whole, a poor, quiet, contented orderly race; spending, not very wisely, all their little savings in finery for their wives and daughters. But the populace of the great towns display a character peculiarly idle, tumultuary, and unlicensed. They seem to combine the characters of citizens, beggars, and bandits. The lazzaroni of Naples, in particular, form a numerous body, who exist almost wholly out of the pale of regular society. The climate enables them to live without houses,—almost without clothes, and with only a daily handful of maccaroni. Having obtained this by theft, by begging, or some little occasional work, they abandon themselves to luxurious indolence, or the indulgence of wayward humours. They are a set of wild merry rogues, with all the rude energy of savages, full of humour, address, ready argument, and quick repartee. In political convulsions they have made very signal displays of energy, usually in defence of the reigning family, to whom they are strongly attached. The practice of assassination, whether for hire or on the impulse of passion, which was long peculiarly Italian, is said to have been considerably reduced by the French. They deprived the sanctuaries of their right to protect the assassin; and that right has not since been restored to them. Another too numerous class are the bandits, who, established in the recesses of the Apennines, form a sort of separate people, and carry on their vocation on a great and regular scale. The strength of their line of mountain positions, which runs close and parallel to that of the high road through Italy, affords them opportunities of which they know well how to profit. The road from Rome to Naples is their favourite haunt, and even when guarded by piquets of soldiers at the distance of every mile, it cannot always be travelled with safety. They carry on their trade in a systematic manner, and not without some adherence to the principle of honour when it has once been pledged. Their grand aim is to carry off some person of distinction, and then to exact a ransom proportioned to his means and dignity. The French and even the German troops stationed in Naples rooted out some of these dens of banditti; but, under the supine indolence of the Neapolitan government, they are again recruiting their strength.

Religion still forms a prominent feature in Italy, the centre of that great spiritual dominion which for so many ages held unbounded sway over Europe. The pope, as spiritual

head of the Catholic church, maintains an establishment rather suited to his former supremacy, than to the limited and almost nominal jurisdiction which he now exercises. The great council of the church consists of the college of cardinals, who, according to the regular establishment, amount to seventy: they are chosen by the pope, and on their part they elect him out of their body. Every fortnight they are assembled in a consistory, to deliberate on the general affairs of the church. Particular departments are also administered by congregations, which have not the signification which we attach to them, but signify public boards. There is a congregation *de propagandâ fide*, for missions to foreign parts and the conversion of heretics; the congregation of the *index*, for making up the list of prohibited books. The Jesuits, since their re-establishment in 1817, have also their head-quarters at Rome, where their *general* resides. The inquisition, now much mitigated in its rigour, forms one of these congregations. There are thirty-eight archbishops in Italy; and the number of suffragans varies according to the pleasure of the pope. The clergy, both secular and regular, were, prior to the Revolution, very numerous; and their possessions were immense, consisting chiefly in land. The tithes were not very severe, and in Tuscany had been altogether abolished. During the French revolutionary sway there was an extensive confiscation of ecclesiastical, and especially of conventual property; and though this has been partly restored, much still remains in the hands of the lay purchasers. It is said that not much benefit has thence accrued to the cultivators, who have merely found a new and often more rigid landlord. Another means of support to the church is from alms; and the two most powerful modern orders, the Dominicans and Franciscans, have expressly announced themselves as mendicant; but the spirit of the times renders this source of wealth much less productive than formerly.

The ceremonies of the Roman Catholic church are exhibited at Rome in all their imposing splendour. Mr. Eustace considers the pontifical service at St. Peter's, and the procession on Corpus Christi day, as, perhaps, the most magnificent spectacles that are exhibited in the universe. All the parade of dress, the blaze of light, and the pomp of music, are united in the magnificent hall of the Vatican, and the vast area of the church of St. Peter, to produce the most imposing and brilliant effect: one of the most striking scenes is said to be in St. Peter's, on the night of Good Friday, when the hundred lamps that burn over the tomb of the Apostle are at once extinguished, and in their stead a stupendous cross of light appears suspended from the dome: in one part of the ceremonies the Pope makes a show of washing the feet of pilgrims, while in another he bestows his benediction on the assembled multitude. These great days are preceded by periods of severe fasting, and followed by a carnival, or interval of almost unbounded license. The gloom of the first period is described by Lady Morgan as enlivened by busy preparation in draping the churches, clothing altars, and forming festoons; also in preparing dresses, crowns, necklaces, and cradles for the Madonna and Child of the respective churches. Sometimes the Virgin blazes in pearls and diamonds; sometimes she can only get a tin crown, set off with gilt paper and glass beads. Mary, according to Mrs. Graham, is the goddess of Italy; even the robbers, who are generally devout, never go forth on a marauding expedition, without her image carefully tied round the neck.

In literature and science, the world is deeply indebted to Italy; first for the classical works which she produced during her Augustan age; and then for the brilliant revival of literature, under her auspices, after a long night of ignorance. In the fourteenth, fifteenth, and sixteenth centuries she could boast of Petrarch, Dante, Tasso, and Ariosto, as standing in the first class of poets; Guicciardini, Fra Paolo, Machiavel, unrivalled among the historians of their own and several succeeding ages; and Galileo as attaining the highest distinction in astronomy and physical science. Along with the political ascendency of Italy, her literary greatness has suffered decay; the magnificent patronage of the Medici and the Estes was no longer extended to it; and the national enthusiasm, by which it had been fed, was depressed by slavery and adversity. Italy, however, has not ceased from time to time to produce distinguished works. The lyrics of Giridi, Chiabrera, Filicaja, have attracted admiration; and the drama, which had been wanting in its fortunate age, was brought forward in a very imposing manner by Alfieri and Monti. At the same time the political works of Filangieri, Beccaria, and Verri, have displayed highly enlightened views; and Spallanzani, Fontana, and others have acquired distinction in medical and physical science.

The literary collections of Italy are of singular value: the library of the Vatican, if not the most extensive, is probably the most valuable, in Europe; the number of volumes (a simple fact, which might be easily ascertained,) has been left to conjecture, which fluctuates, according to Mr. Eustace, between 200,000 and 1,000,000: he advises to take the middle, which makes a very vague kind of estimate. The manuscripts, the most curious and valuable part, are reckoned by him at 50,000, but by Mr. Cadell only at 30,000. They comprise very early copies of the gospels, the classics, and writers of the middle age. The French extorted the surrender of 500, to be selected by themselves; but if (as reported by Lady Morgan) the choice was capriciously made by illiterate officers, it may not have materially reduced the value of the collection. The Ricciardi and Magliabecchi libraries, at Florence,

and that of the Institute of Bologna, though secondary to the above, contain, however, a rich store of ancient manuscripts and early printed works, formed by the munificent princes who once reigned over these cities. The riches of that of Milan have been sufficiently proved by the learned researches of M. Angelo Mai, who has retraced the lost works of Cicero and other classic authors, erased in order to make way for monkish legends that have been written above them. The library formed by the house of Este, at Modena, notwithstanding severe and repeated losses, possesses still considerable wealth. At Naples, the papyri, dug out from the ruins of Herculaneum, present still one of the greatest modern literary curiosities.

The fine arts in Italy have attained a splendour quite unrivalled in any modern country, and have even flourished in that region as their chosen and peculiar soil. An aristocracy living in cities, and estranged from rural habits, naturally centered their pride and gratification in covering their country with this species of embellishment. The houses of the Medici and of Este, with the nobles and senate of Venice, vied with each other in raising such monuments.

Painting, in the sixteenth century, and in the Roman and Florentine schools, reached a height of perfection unequalled, perhaps, even in ancient times. In all the qualities of form, design, and expression, which constitute the highest excellence of the art, no names can yet rival those of Michael Angelo and Raphael. A school nearly contemporaneous was formed at Venice, which, as to the beauty of colouring, stands unrivalled. It is remarkable that, ever since this early period, the art has been in a state of gradual decline. The school of Bologna, however, which immediately succeeded, attained to very great excellence, just below that of its predecessor. But, for more than a century, though Italy has had some showy and popular painters, there have been none who could establish any classic reputation: at present, notwithstanding the respectable names of Camuccini and Naldi, the general character of art is very secondary. An ingenious writer complains of the cold, glaring, hard style adopted by those who have the opportunity of studying the most masterly of the ancient works. Indeed, Mr. Williams suspects that the constant copying of these works, and often for the mere purpose of sale, deadens the invention of the Roman and Florentine painters.

The sculpture of Italy, even during its happiest ages, did not equal that of the ancient schools; though Michael Angelo and Bandinelli, combining it with painting, produced some very splendid specimens. In the present age the genius of Canova has burst forth with a brilliancy which has enabled modern times in this art almost to rival antiquity. Thorwaldsen, also, though a Dane, having been completely formed and fixed at Rome, has generally been considered as Italian.

Engraving is an art subsidiary to painting and sculpture, and naturally following in their train. Notwithstanding the interesting school formed by Raphael, and the valuable etchings by the Bolognese painters, Italy seems, in this department, to have long remained behind France and Flanders. This reproach has been removed in the present age, when the patronage afforded by an association of nobles has produced Volpato, Bettelini, Gandolfi, and above all Morghen, justly, perhaps, considered as the greatest engraver that ever existed. The talent of these artists also having been employed solely on the finest pieces of the early masters, has rendered their engravings of peculiar interest and value.

Architecture is another art in which Italy has no modern rival. Though some of the northern nations may have erected more huge and more costly structures, none of them display the same high, pure, and classical taste. Besides Palladio and Bramante, who hold the foremost place among professed architects, Michael Angelo employed himself in designing several great edifices, which are stamped with all the grandeur of his genius. Hence, notwithstanding the astonishing magnificence of the architectural remains of ancient Rome, they are completely matched by St. Peter's, the Lateran, S. Maria Maggiore, and other modern churches.

The collections of art in Italy are of a splendour surpassing even that which might be inferred from the great works produced by its artists. Of the masterpieces of the ancients which were either saved from the desolation of the Eastern empire, or dug up from the ruins of temples and palaces, by far the greater part were either found in Italy, or brought into it; and that country became the grand depository alike of ancient and modern art. Even at the time when French rapacity had stripped it of all its moveable treasures, the grand productions of Michael Angelo, Raphael, Caracci, and Titian, painted upon the walls of temples and palaces, remained immutably fixed. Italian pictures form still the brightest ornament of all the collections beyond the Alps; yet the multitudes which have been purchased out of Italy, seem scarcely missed amid the profusion of those which remain. Rome continues still the great *studio* of all the nations of Europe: no painter is considered fully accomplished until he has spent a year or two in that capital; and many from the most remote countries, enamoured of its beauties and advantages, make it their residence for life.

In music, Italy has boasted a similar pre-eminence; and for a long time all the great composers in the high style of art, Pasiello, Cimarosa, and Salieri, were exclusively Italian. Of late, however, Germany has come forward as a powerful rival; Vienna especially has

produced several composers of the first class. Yet Italy seems still to be regarded as the chief home of the musical art; thither all the students repair; and its vocal performers are considered over all Europe as superior to those of any other country.

The amusements of Italy have been already touched upon, in estimating the character of a people, of whom so large a proportion live only for amusement. The arts now enumerated, as brought to such perfection, furnish a great part of their daily recreation; to which they add a still more refined one, improvisatory poetry. In all the societies of Italy, there are bards who are ready to recite a crowd of verses, upon any subject proposed, on the spot; and many have been celebrated as of great excellence. We are not aware, however, that any of the productions of these improvisatori have obtained the notice of the world in general; and it seems on the whole to be rather a process for the display of quickness of fancy, than one by which works of superior merit can be produced.

The mansions of Italy are celebrated for the splendour and art displayed both in their form and interior decoration. Those built by the nobility in Rome, Florence, Genoa, and Venice, are usually dignified with the name of palaces; and their classic exterior, spacious apartments, and the works of painting and sculpture with which they are adorned, render them often more interesting to the spectator than those of the greatest monarchs beyond the Alps. They are maintained, however, rather for show than use; all the finest apartments being employed as galleries of exhibition, while those in which the family reside are of small dimension, in the upper stories, and destitute of many of the comforts which, to an English gentleman, appear indispensable: in short, to him they appear little better than garrets. The taste for architectural beauty descends even to the lower ranks. The houses of the little farmers in Tuscany and Lombardy are adorned with porticoes and colonnades, and often display a classic aspect (*fig.* 351.).

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Tuscan Cottage.

The dress of the Italians does not seem to have any features peculiar or strictly national. Among the upper ranks, French fashions prevail; many of those in the country, and especially of the hilly districts, display a picturesque variety, which, being not unaccompanied with taste, produces often a very pleasing effect (*fig.* 352.)

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Italian Costume.

In the food of the Italians, who are generally very temperate, we know not any very characteristic article, except maccaroni. In the rest of Europe it has not been generally adopted as an article of diet, but it is presented as a delicacy at the tables of the opulent.

SECT. VII.—*Local Geography.*

The local divisions of Italy are more than usually prominent; for though the country is united by name, by a common language, and by a strong national feeling, it has yet been partitioned into a number of states, politically independent of each other. The numerous little republics, indeed, which once made so brilliant a figure, and disputed for supremacy, have, in the late convulsions, lost the feeble remains of their existence, and merged into the great states. Italy is thus divided into five great portions: 1. The Ecclesiastical States; 2. Tuscany; 3. Lombardy, or the Austrian States; 4. The States of the King of Sardinia; 5. Naples and Sicily: to which must be added the smaller states of 6. San Marino; 7. Modena; 8. Lucca; 9. Parma; 10. Monaco.

Subject. 1.—*Ecclesiastical States.*

The Ecclesiastical States have lost that paramount importance which they once possessed, and are the least flourishing and powerful of all the divisions of Italy. Nevertheless, as they contain Rome, with all its stupendous monuments, and were the central theatre of all the ancient grandeur of Italy, they still excite an interest superior to that of any other of these celebrated regions. They form a central band, extending entirely across the country, and separating the north from the south of Italy. Since the acquisition of Ferrara, their eastern portion shoots a large branch northwards as far as the Po. They are thus in contact on one side with Tuscany and Lombardy, on the other with Naples. The Apennines pass entirely through them, producing on their borders some of the most beautiful scenery in Europe,—the lake of Perugia, the falls of Terni, the magic scenes of Tivoli and Frascati. These mountains divide the states into two unequal plains, of which the western is the most extensive, and contains the city of Rome; but it is in a great measure waste and pestilential. The eastern, comprising the Bolognese and the March of Ancona, is more fertile and better cultivated, but much narrower, being closely hemmed in by the Apennines and the Adriatic. The mountains produce timber, chestnuts, fruits, and even silk, wine, and oil, though not equal in quality to those of the Florentine and Neapolitan territories. There is very little manufacturing industry of any description. The annats, contributions, and indulgences, which anciently maintained the pontifical sovereign in such pomp, have disappeared with the decaying faith of the Catholic world. He maintains about 6000 or 7000 troops, which are little better than a species of militia.

The population of the Ecclesiastical States is nearly 2,600,000. Principal towns:—Rome, 150,000; Bologna, 70,000; Ancona, 30,000; Perugia, 30,000; Ferrara, 24,000; Ravenna, 16,000; Forli, 16,000; Rimini, 15,000; Pesaro, 14,000: Benevento (in Naples), 14,000; Ascoli, 12,000; Viterbo, 12,000; Macerata, 12,000; Urbino, 11,000; Loretto, 8000; Civita Vecchia, 7000.

The revenue is in a great measure conjectural, from the want of any official statements. M. Balbi, in a communication to the *Bulletin Universel*, states it to have amounted, in 1818, to 1,720,000*l.*; of which there was derived from land-tax, 400,000*l.*; from customs, 300,000*l.*; monopolies, 190,000*l.*; registers, &c. 200,000*l.*; lottery, 135,000*l.* At present, the same writer estimates it only at 1,237,000*l.* burdened with a debt of 24,700,000*l.*

Rome (*fig.* 353.)is the capital of the Ecclesiastical States. This ancient city, still great

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Rome.

in its decline, presents to the reflecting mind a more interesting spectacle than the proudest capitals of the modern world. It holds enshrined, as it were, all the sublimest monuments of history and antiquity. Every spot is rendered sacred by awful names and heroic actions. The memory of those who rose in genius and glory above the rest of mankind, and of those whose nod fixed the destinies of the world, seems to hover around the "eternal city." Gibbon, while he disclaims enthusiasm as a part of his character, admits that it never left him during the weeks which he spent in wandering through the streets and monuments of Rome. Independent even of these high associations, Rome contains the most perfect works in architecture, painting and sculpture, produced in the ages both ancient and modern, when those arts had reached their proudest height. Even now, all who wish to attain taste or perfect skill in those refined and beautiful arts, flock to Rome as their school. To celebrate Rome as it was, and as it is, libraries have been written; but we can merely mention those grand features which render it the admiration of the world.

The outlines of ancient Rome, and its relation to the modern city, may be distinctly traced. Forsyth distinguishes three cities called Rome; that which the Gauls destroyed, that which Nero burned, and that which Nero rebuilt. The walls begun by Servius Tullius, and completed by Aurelian, present specimens of all the successive forms of construction which prevailed in Rome. The modern city is still enclosed by them; but it covers only a portion

of the vast site occupied by the mistress of the world. It extends chiefly over the Campus Martius and along the Tiber, forming a curve round the base of the Capitol. The spectator must turn to the other side of that hill before he is met by the genius of ancient Rome. There, scattered in vast and shapeless masses over the seven hills, appear its ruins. They stand in lonely majesty, with groves of funeral cypress waving over them. Its palaces, its tombs, its baths, its temples with their pointed obelisks, stand majestic but solitary monuments amid the extensive waste of time and desolation. The Palatine, which originally contained the whole city, which remained always its chief and most populous quarter, and is represented by Cicero as crowded with the senate, the orders, and with all Italy, presents a mere landscape, with two solitary villas and a convent. The temples, palaces, and porticoes lie in such shapeless heaps, that the utmost learning of the modern architect and antiquary have been wasted in fruitless attempts to discover their plan and their site. Of the imperial palace only some vaulted subterraneous chambers of one wing remain. In general, it may be observed that with the exception of a few grand objects, the details of ancient Rome have escaped the most anxious researches of the learned. We cannot tell the site of many of the objects even most famous in antiquity. We cannot say, "Here stood the house of Mæcenas, of Cicero, of Horace." However, the Capitol, the Forum, the hills, are stamped with those characters of antiquity that cannot be mistaken: "a walk from the Capitol to the Coliseum comprises the history of ages." The leading features in Rome are the ancient edifices; the modern edifices; the works of painting; and the works of sculpture.

Of the ancient edifices, though many retain only their rude foundations, and others have been so shattered, that their original form cannot now be traced, enough yet remains to inspire the most solemn emotions, and to give a full idea of the perfection of ancient architectural design. The monuments of Rome are divided by Forsyth into the works of the kings, of the republic, and of the empire. The first are of the solid and rude Tuscan order, with large uncemented blocks; but only a few detached specimens of them can now be traced. The works of the republic were almost strictly limited to the objects of utility and power,—aqueducts, bridges, roads. It was not until the period of the empire, or at least until the liberties of Rome, undermined by the vast wealth of conquered kingdoms, were rapidly falling, that the arts of Greece, admired and imitated, enabled Rome to produce her perfect specimens of architecture. The orders were Grecian; but it is remarkable that, while the Doric and Ionic predominate in the original country, in Rome the highly ornamented Corinthian, of which the Composite is only a variety, was employed in all the principal edifices. Of these, the Pantheon and Coliseum remain nearly entire, or with only such touches of ruin as render them more awful and picturesque. The Pantheon (*fig.* 354.), whose portico, it is said, "shines inimitable on earth," preserves uninjured this feature, its graceful dome and its pavement, and the rich fluted marble pillars that line its walls; while the deep tints of age only serve to render it more venerable. Yet Mr. Eustace laments it as shorn of its beams by the disastrous twilight of eighteen centuries; he regrets its proud elevation, the statues that graced its cornice, the bronze that blazed on its dome, the silver that lined the compartments of its roof within: but, on the whole, Mr. Forsyth conceives no monument of equal antiquity to be so well preserved; which seems owing to its fortune in having been converted into a Christian church. The amphitheatre, called the Coliseum (*fig.* 355.), that spacious structure

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Pantheon.

"Which, in its public days, unpeopled Rome,
And held uncrowded nations in its womb,"

presents still the most gigantic monument of the Roman world. Fifty thousand people could find seats in it; yet this huge space was, it appears, sometimes insufficient for the multitudes who thronged to witness the cruel spectacles there exhibited. This edifice, by its circular form, and the solidity of its materials, was enabled to defy the effects of barbarism; but it fell a victim to the hand of taste. The modern nobles, in seeking to adorn Rome with palaces, used the Coliseum as a quarry out of which the materials might be drawn. The Farnese palace, one of its most boasted structures, is en-

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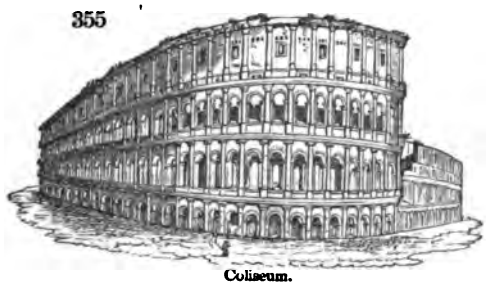

Coliseum.

tirely built out of it. The work of spoliation was arrested before it had stripped off more than half of this august edifice; and from the frequent repetition of its parts enough remains to enable the architect to design a complete restoration. Some criticisms have been made on its details; but on the whole it is allowed to be the most magnificent, and to excite the most solemn emotions, of any existing monument of antiquity. Baths form another most superb class of Roman monuments. Those of Caracalla resemble the ruins of a city rather than of any single structure. They afforded, in fact, every variety of recreation; containing temples, porticoes, libraries, and theatre. It is supposed that there might be accommodation for three thousand persons to bathe at a time. The numerous columns, paintings, and statues, have been obliterated; though, of the latter, the Hercules and the Toro Farnese were dug up from beneath. But the walls and many spacious apartments remain, and the general outline may still be distinguished. There are traces of a mosaic pavement, which appears to have extended over the whole. The baths of Diocletian are almost equally vast, but show a decline of the art; a considerable portion of them is now converted into a convent of Carthusians. The baths of Titus are smaller than either; but they appear to have been constructed in a purer taste, and beneath them was found the Laocoon, and the finest remains of ancient painting. The column of Trajan (*fig.* 356.) and that of Antoninus (*fig.* 357.)

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Column of Trajan.

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Column of Antoninus.

survive as magnificent examples of this description of edifice. They are of the finest white marble, about one hundred and twenty feet high, and decorated with a series of sculpture, which winds in a spiral line from the base to the capital of each, representing their respective wars and triumphs. That of Trajan, in particular, contains 2500 figures; forming a complete system of Roman antiquities, and a mine from which all modern painters have drawn materials. The two emperors have been deposed from their lofty shrines, and in their room have been elevated, with very bad taste, representations of St. Peter and St. Paul. Triumphal arches formed with the ancients a favourite mode of commemorating great actions and signal achievements. Of these, Rome still exhibits some splendid remains. The Arch of Constantine (*fig.* 358.) is the loftiest, the noblest, and in the purest style of architecture. That of Titus is richer, but is considered by Mr. Forsyth as too much crowded with sculpture. Those of Severus and Gallienus are decidedly inferior. The tombs are lastly to be mentioned, as an object on which art and pomp were lavished by the ancients. Those of Augustus and of Adrian are on the most gigantic scale, resembling subterraneous cities. The lower vaults of the former are large enough to serve for a modern amphitheatre; but they were tombs on a hospitable system destined to contain not himself and his relations only, but his freedmen and all their families. That of Adrian, reduced to half its dimensions, still forms the Castle of St. Angelo, the spacious citadel of Rome. Greater elegance appears in the tomb of Caius Cestius, a lofty pyramid,

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Arch of Constantine.

which rises in lonely pomp, looking upon a hundred humbler tombs in the neighbouring grove, and supported on either side by the ancient walls of the city venerable in decay.

Of the modern edifices of Rome, those devoted to ecclesiastical purposes are by far the most conspicuous; for, though Venice and Genoa may compete in the splendour of palaces, in churches no other city can be compared with this metropolis of the Catholic world. They present also specimens of successive styles of architecture; many of them having been begun in the first centuries, and enlarged and embellished by a long line of pontiffs, till they have become perfect treasuries of wealth and art. Some of these series were not in the very purest taste; but as, even in the dark ages, they were often modelled after ancient structures which were always present to inspire ideas of grandeur, none of them exhibit marks of total degeneracy and deformity. "He, therefore," says Eustace, "who delights in halls of an immense size and exact proportion, in lengthening colonnades and vast pillars of one solid block of porphyry, of granite, of Parian or Egyptian marble; in pavements that glow with all the tints of the rainbow, and roofs that blaze with brass or gold; in canvas warm as life itself, and statues ready to start from the tombs on which they recline, will range round the churches of Rome, and find in them an inexhaustible source of instructive and rational amusement." Foremost among the churches of Rome, and of the world, stands the majestic front and sublime dome of St. Peter's (*fig.* 359.) On its site has always been the

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principal church of Rome, erected by Constantine, and rendered sacred by containing the ashes of the apostle from whom the bishops of Rome claimed their descent and authority. After being embellished during successive ages, it began to threaten its fall, when Nicholas V. and Julius II. conceived the project of erecting in its stead a new and nobler structure. It was carried on for a hundred years, by eighteen pontiffs, all devoting to it a large portion of their treasure, and employing upon it the talents of Bramante, Michael Angelo, Bernini, and other artists, the greatest of that most brilliant age. It is surprising with what unity the successive artists worked over each other's plans. The first, indeed, is liable to criticism; but the colonnade and the dome are perfectly unrivalled, and render it the most magnificent structure that ever was reared by mortal hands. The Basilica of St. Paul's is still more ancient, having been built by Theodosius, and presents great vestiges of ancient magnificence, consisting in painted walls, and long ranges of marble and porphyry columns. Though several times repaired, it has still, however, a forlorn, unfinished, and almost ruinous appearance; presenting the aspect of a desolate and melancholy monument. The church of St. John Lateran claims a still higher dignity; being, in preference to St. Peter's, the regular cathedral church of Rome; on which ground it assumes the lofty title of mother and head of the churches of the city and the world. It was, in fact, adorned with three hundred antique pillars, which would, it is supposed, have formed the finest pillared scenery in existence; but, unhappily, it came into the hands of a modern architect who seems to have been actuated by an antipathy to pillars, and who walled up a great proportion of them. The S. Maria Maggiore is another church, of which Eustace doubts if any architectural exhibition surpasses or even equals it. The two magnificent colonnades, and the canopy which form its interior, constitute its prominent beauties. Besides these four principal churches, Rome contains numerous others, distinguished by their antiquity and embellishments, especially of painting and sculpture. The other leading ornament of modern Rome consists in its palaces. A fondness, and almost a rage, for erecting magnificent structures generally possesses the Italian nobles, and displays itself peculiarly in their town residences, which are hence usually dignified with the appellation of palace. So vast are those of Rome, that, with their appendages, they cover more ground than the modern habitations. They do not in general display the same lofty style of architecture as the churches or temples. Their

place in the street does not allow room for the open gallery and spacious colonnade; and the external ornaments, even of the most splendid, consist chiefly in pilasters. Their chief attraction is in the spacious courts and porticoes within, the vast halls and lofty apartments, with the pillars, the marbles, the statues, and the paintings that furnish and adorn them in such profusion. Indeed, they are maintained in a great measure as galleries of painting and sculpture. These superb mansions are now in a state of decay: two of the most splendid, the Farnese and the Medici, belong to foreign princes, and are left under the care of stewards; while many of the great nobles, suffering under the hardships of the times, can no longer support the expense of keeping these vast mansions in repair, and have been obliged to dispose of some of their most valuable contents. The Barberini palace, erected by the cardinal of that name, with a noble library, opened on certain days to the public, contains many statues and pictures. The Farnese palace is considered the first in Rome for its architectural beauties, plundered, however, from the Coliseum: on its walls are painted the Gallery of Annibal Caracci, and the Galatea of Raphael; but its Torso and Hercules have been carried away to Naples. The Colonna, illustrious for the heroism and virtues of the family whose name it bears, is distinguished also by a gallery, the finest, perhaps, in Europe, adorned with Corinthian pillars and *giallo antico;* but the paintings of Claude, which formed its chief ornament, have been sacrificed amid the late distresses. The same fate has befallen the Claudes of Altieri. The Borghese has been celebrated for its profusion of works of art, particularly in sculpture; but these last, having been purchased by the Bourbons, remain at Paris. The Giustiniani, built on the site of Nero's baths, contains a vast profusion of statues dug up from beneath them. The Corsini is noted by its vast extent, its having been the residence of Christina queen of Sweden, and by its library, said to have amounted to 400,000 volumes. The Doria has a magnificent gallery, with many paintings by the first masters; the Rospigliosi has the Aurora of Guido painted in fresco on its walls; and the Spada has the colossal statue of Pompey. The pontifical palaces, however, eclipse them all. The Vatican is pre-eminent, not by its external structure, which is simple, and not very uniform, but by its vast extent, being 1200 feet by 1000; by the number of its apartments, which have been estimated at 11,000; and, much more than all, by its contents, which are more precious and interesting than those of any other palace or edifice in existence. It contains the most valuable library in Europe, the finest works of Raphael and Michael Angelo, and a vast collection of ancient sculpture, including several of its choicest specimens. The thunders of the Vatican have ceased to agitate Europe, and this palace is now prized only as the great school of the peaceful and elegant arts. The summer palace on Monte Cavallo, the ancient Quirinal, is very extensive, but of simple structure, and has spacious and fine gardens. The Lateran is an elegant but smaller edifice, only used when service is to be performed in the neighbouring church.

The works of painting and sculpture with which Rome is adorned, excel, as already observed, those of any other city in the world. The Roman school surpasses any in modern times in force and expression, the qualities which constitute the highest excellence of art; but, besides the works of Raphael, its leader, and of his disciples, the munificence of the pontiffs enabled them to attract the great masters from other cities of Italy. Michael Angelo, though a Florentine, executed scarcely any of his works at Florence; his Last Judgment, his Creation, his Prophets, are all painted on the walls of the Vatican. Of the school of Bologna, the Farnese Gallery by Annibal Caracci, the St. Jerome of Domenichino, the Aurora and Magdalen of Guido, rank as the best works of those respective artists. The series of Raphael's frescoes in the Vatican is probably the grandest in the world; for his Cartoons, preserved at Hampton Court, though equal in design, are comparatively unfinished. The choicest works of ancient sculpture having been employed to adorn the Roman temples and palaces, were dug up from beneath them to adorn the modern city: these, however, being all moveable, suffered still more than the paintings by the French system of spoliation, and all those which were of any value were carried away, that the Louvre might be made the centre of art. Even in the course of the restoration, several have been withdrawn. The Borghese collection, with its Hermaphrodite and Gladiator, remain, as already stated, at Paris; the Venus has been taken to Florence, and the Hercules to Naples. Rome, however, retains the Laocoon, the Gladiator, and a profusion of other works, still much superior to those found in any other city.

Modern Rome, taken altogether, and independent of the many single majestic objects, cannot be called a fine city. The streets are narrower than those of London, though wider than those of Paris, and are covered with a reticular pavement, well suited for carriages, but annoying to the foot passenger. The houses are built of stone plastered with a species of stucco, which is extremely durable, yet can never convey to our minds the same ideas of richness and solidity. But the heaviest charge brought against Rome is its excessive dirt, in which it may vie with Lisbon itself. Filth is accumulated even in presence of the most majestic piles, to such an extent as renders them unapproachable to a nation so punctilious in this particular as the English. The whole pavement around the Pantheon is revolting to every sense, sprinkled with blood and filth, entrails of pigs, or piles of stale fish. Few ves-

'iges remain of the 144 cloacæ, which were so salutary to the ancient city. The Roman Forum, which especially recalls such high associations, and is adorned with the most majestic ruins, being now converted into a cow-market, makes a profuse display of every description of filth. The population, however, has increased, in consequence of the resort of strangers, and is supposed to be nearly 150,000.

The villas in the vicinity of Rome form an additional ornament to the city, especially the extensive gardens which surround them. The gardens of Lucullus, of Mæcenas, of Sallust, were peculiarly spacious and magnificent; and those of the modern palaces, though on a scale less vast, partake of the same character. Several command extensive views over Rome, anciently adorned with those stupendous edifices which were the wonder of the world, but now, perhaps, more interesting when the same edifices are lying on the ground, and overgrown with cypress. No spot commands so fine a view over these awful and immortal remains as the Farnese gardens on the Palatine Mount. Of these villas, the Villa Borghese (*fig.* 360.) is the finest and most ornamented, and its walks, which, however, are too much in the old formal style, are open for the recreation of the public. The Villa Ludovisi contains the Aurora of Guercino; and the Villa Aldobrandini has the representation of a Marriage, which is viewed as the finest relic of ancient painting.

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Villa Borghese.

The more distant environs of Rome consist, in the first instance, of that wide *campagna* or plain, which its pestilential air has devoted to almost total desolation. In approaching, however, to the branches of the Apennine, a singular variety of picturesque scenery begins to open. Gentle hills, with little lakes embosomed in them, and swelling into bold and lofty mountains, crowned with extensive forests; cascades dashing down their steeps, and smiling plains intervening;—these, with brilliant skies and balmy airs, are common to this region with many others; but it derives peculiar interest from the edifices, noble in ruin, which adorn the brow of almost every hill, and from the recollection of the many illustrious ancients who in these shades wooed the Muses, and sought recreation from the toils of war and of empire. These features render this the peculiar region of the grand landscape, the scenes in which Poussin and Claude found the materials of their sublime compositions. An ingenious lady observes, that when she viewed these in England, she only exclaimed, "How grand!" but after seeing Italy, she added, "How natural!" Tivoli, (*fig.* 361.) the ancient Tibur, the residence of Mæcenas, and Horace's favourite haunt, is celebrated over all Italy for its natural beauties. They consist chiefly in the windings and falls of the Anio, now Teverone, particularly the great fall, whose summit is crowned by the Temple of the Sibyl, a small edifice, but one of the most elegant and finely proportioned, which has been transmitted from antiquity. The river pouring down in two broad sheets, the rocks fringed with shrubs, and crowned with forests, and with this beautiful ruin, produce a combination scarcely to be equalled. The temple stands, not very appropriately, in

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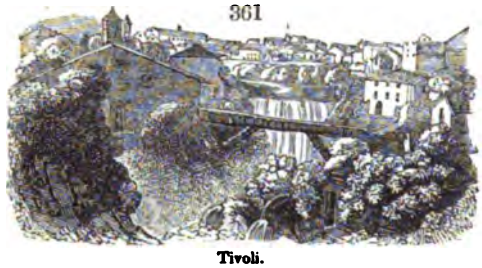

Tivoli.

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Cascade at Tivoli.

the court-yard of the inn, and the late Lord Bristol had made arrangements for purchasing and conveying it to England, when the Roman government prohibited the removal. The range of smaller falls, (*fig.* 362.) called Cascatelle are equally beautiful, and adorned with the ruins of Mæcenas's villa, which still presents traces of its former magnificence. The country round Tivoli is as fertile as beautiful, and still supports in the town a population of about 10,000 souls. There are several fine villas round it; but the Italians in general have little taste for rural scenery. Horace's villa stands higher up the river, amid the recesses of Mount Lucretilis,

which Mr. Eustace considers so beautiful a combination of groves, rocks, hills, flocks and herds, as Arcadia itself could scarcely rival. Only part of a wall and some mosaic pavement indicate the spot. In a different direction is Frascati, on a hill near which Cicero had erected that beautiful villa, which was boasted as one of the eyes of Italy: it commanded a noble view of the plain of Rome, with the conspicuous and majestic feature of the Alban Mount rising behind. Not a vestige remains, except some pillars, which have been employed to adorn a monastery built on its site. The ruins of Tusculum appear scattered in long lines of wall, and of shattered arches intermingled with shrubs and bushes over the summit and along the sides of a mountain, on the lower declivity of which stands the modern town of Frascati. In this vicinity is the Lake of Albano, with waters clear as crystal, finely surrounded with steep and richly wooded banks, and adorned by the noble edifice of Castel Gandolfo. Farther on is a solemn scene, the Lake of Nemi, anciently Nemus Dianæ, from the grove sacred to that goddess: it is small, seated in a deep hollow of the mountain, which it partly fills; the banks are not only wooded, but highly cultivated. In the centre of this lake, Trajan had moored a floating palace in the form of a ship, of which some fragments were dug up in the sixteenth century. We may also class with Roman picturesque scenery, though at a greater distance, the fall of Terni on the declivity of the Apennines. Here, as generally in Apennine scenery, the bold and grand are finely combined with the soft and the beautiful; the steep and rugged rocks being mixed with the verdure of the acacia, the laburnum, and a variety of other trees. The whole valley of the Nar, with the neighbouring one of Clitumnus, presents the Apennine in its mildest form, adorned with rich vegetation and beauty. The ruins of the ancient colony of Narni stand most romantically bosomed in groves on the top of a very high and steep hill, at the foot of which are some fragments of the proud arches thrown over it by Augustus.

Bologna is by much the most important city of the Ecclesiastical State east of the Apennines. It is one of the most ancient and venerable places in Italy: its university, once said to have contained 10,000 students, and its school of painting, scarcely second to those of Rome and Venice, have raised it to distinction as a seat of learning and art. After passing in its republican state through many turbulent revolutions, it voluntarily, in the sixteenth century, united itself to the Roman state; stipulating, however, for the preservation of many of its privileges. It had still a senate of forty hereditary nobles, presided by a gonfaloniere, besides a popular body, which superintended matters of revenue and police. A republican spirit, however, always prevailed in Bologna; and in 1796, it gave to the French army a welcome, which met with the usual return; the city being deprived of all its constitutional rights, and assimilated to the despotic sway established in the kingdom of Italy. The Pope, in 1815, was reinstated in possession of it by the arms of the Allies; but, to the just discontent of the city, he declined restoring any of its privileges, and continued the same absolute sway which had been established by Napoleon. However, though oppressed and fallen, it retains still many features of the learned and opulent Bologna of the middle ages. Its territory forms a continuation of the great plain of Lombardy reaching to the Apennines; and it is as laboriously cultivated, and the peasantry are apparently in a more joyous and happy condition. The city is well built, with long lines of arches and columns, affording beneath, a paved walk to foot passengers; an accommodation rare in Italy, and an object of envy. The principal church is that of St. Petronius, a spacious, though not a beautiful, Gothic edifice. That of St. Dominic is celebrated for its shrine, which occupied the chisel of Michael Angelo and Nicolo; and for a collection of pictures, which have since, however, been transferred to the Institute. There is also a highly ornamented church, dedicated to the Virgin, situated about five miles from the city. The palaces are spacious, and distinguished both for their architectural beauty and the works of art which they contain; but those of the Zampieri, the richest of all, have been transferred to the Brera collection at Milan. The university does not at present number more than 500 students; yet its professors are still eminent, and most of the science which still exists in Italy centres at Bologna. But the great modern boast of this city is the Institute, formed in the seventeenth century, chiefly through the exertions of two of its noble citizens, Count Marsigli, a general in the imperial service, and Count Manfredi. At their instance, the city purchased the palace *Cellesi*, one of the most spacious in Bologna, in which are now accommodated the Academy of Sciences founded by Manfredi, which has brilliantly maintained its reputation; a library of 150,000 volumes; various scientific collections; and a gallery of paintings, in which, as well as in the churches, are seen numerous specimens of the great Bolognese masters; the three Caraccis, Guido, Domenichino, and Albano. Here instructions are also given to young artists.

Ferrara, the celebrated seat of the princes of Este, who made themselves so prominent as the patrons and persecutors of the learned, is large, dark, and antique. "The long and spacious streets, silent, solitary, and grass-grown, give it the solemn air of a deserted city." The castle of the duke, that grand theatre of feudal pomp, is a vast structure, with lofty towers, and surrounded by a broad ditch, in the very heart of the city. Ferrara has many spots which recall interesting but painful recollections: the cell of the hospital of St. Anne,

in which Tasso was so barbarously immured; the dungeons in which several votaries of the Reformation perished; the tomb of the oppressed and injured Ariosto.

Other considerable and interesting cities distinguish this coast. Ancona, the principal naval station of the Romans on the Mediterranean, retains its admirable port, capable of accommodating commerce of any extent, and in fact carrying on most of the little which belongs to the patrimony of St. Peter. The magnificent mole erected by Trajan to cover the port still remains, and is considered the finest work of the kind extant. Rimini is a place of high historical memory. It was conquered by Belisarius, and in the middle ages was one of the chief stations of the predatory bands. The city is still standing. Condottieri, with its castle, converted into a Roman barrack, presents still a romantic aspect. Fano, the scene of Asdrubal's defeat, Pesaro, and Sinigaglia, are agreeable country towns, rendered gay by the residence of numerous nobles. [Ravenna, once the residence of the Roman exarchs, even in its fallen state, contains many remarkable edifices. Its port, in which the fleets of Pompey and Augustus wintered, is now entirely filled up.] Loretto has long excited the admiration, and been the resort of the whole Catholic world, from a legend reckoned among the surest in the Roman calendar. The house of the Saviour's nativity, after Palestine fell into the hands of the infidels, was, it seems, carried miraculously through the air by angels, and established in this favourite city; princes, prelates, and princely dames, undisturbed by any profane doubt, flocked from every part of Europe to contemplate and pay their adoration to so holy an object; the sacristy was heaped with treasures; the mean hovel was encased in sculptured marble, and the black wooden Madonna was loaded with gold and jewels. Her crown of diamonds, however, and all her accumulated treasures, were plundered by the impious hands of the French republicans, and appropriated to the military chest. She was reinstated after the battle of Waterloo, when the Pope and the king of France gave her a new velvet gown, and a considerable number of diamonds. Loretto is no longer enriched by pilgrims, most of those who now resort thither beg their way, and must be supported at the expense of the church. A pretty brisk trade is, however, driven in beads, rosaries, crucifixes, and relics. The town is otherwise poor, and swarming with beggars.

SUBSECT. 2.—*Republic of San Marino.*

We must not quit the papal territory, without noticing what has been called the freest and most virtuous of all commonwealths, that formed on the insulated rock of San Marino. Founded by a man of low rank, and having become a refuge for those who sought peace amid the turbulence of the feudal ages, it has remained inviolate for thirteen centuries, either respected or overlooked by the proudest and most mighty oppressors of Italy. It has still "Liberty" inscribed on the gates of its little capitol, and exemplifies, in the virtue, simplicity, and happiness of its people, the powerful influence of free institutions. [The government is vested in 60 senators, 20 patricians, 20 burgesses, and 20 peasants, chosen for life, and two gonfaloniers chosen for three months. The arringo or general assembly of citizens is held once every six months. The revenue of the state amounts to $15,000; the army consists of 60 men. The population of the capital is about 5000; four villages constitute the rest of the territory of the republic.—AM. ED.]

SUBSECT. 3.—*Tuscany.*

The duchy of Tuscany ranks next to the Roman states as the theatre of great historical events, and has surpassed Rome itself as the seat of modern learning. Its first glories even preceded those of the metropolis. The Etruscans, the earliest masters of Italy, were found by the Romans divided into ten powerful, brave, and, in some respects, civilized commonwealths. They were vanquished, however, and so completely destroyed, that the antiquary seeks in vain to fix the site of Veii, Fidenæ, and of the other large and strong cities, on which flocks have now fed for more than 2000 years. Under Rome, Etruria, though held in some veneration as a seat of early religion and learning, never reached any political importance. Amid the tumult of the middle ages, however, there arose in it a cluster of proud republics. Florence, Pisa, Sienna, Pistoia, acquired distinction for their wealth, their valour, their lofty spirit of independence, and their zealous cultivation of the arts and sciences. Under the influence of freedom, they performed achievements and erected monuments on a scale much beyond their narrow territory and limited population. By a series of revolutions, internal and external, these states have been stripped of all their greatness and glory, and united, notwithstanding their deadly hatred of each other, under the sway of a prince of the house of Austria. The yoke, however, has been mild, and, under Leopold, was singularly beneficent. Little, indeed, remains of the commerce and industry by which Florence was formerly so distinguished; but the vale of the Arno, the plain of Pisa, and the environs of Sienna, are still as highly cultivated and productive as any part of Europe. The arts of painting and architecture are fallen from their ancient eminence, but the monuments of them remain, and are rendered more interesting by the tints which time has thrown over them. Tuscany contains about 8,760 square miles: and in 1826 had 1,275,000 inhabitants.

Principal towns:—Florence, 80,000; Leghorn, 66,000; Pisa, 20,000; Sienna, 18,000; Prato, 10,000; Pistoia, 12,000; Arezzo, 7000; Cortona, 4000.

Florence (*fig.* 363.), which attained so great a name under the humane and enlightened sway of the Medici, is still a delightful city. Its situation is peculiarly happy, in the vale of the Arno, which forms one continued interchange of garden and grove, enclosed by hills and distant mountains. Its public buildings are fine, though all modern. Being surpassed by those of Rome, they no longer excite any peculiar interest. The cathedral, however, while St. Peter's was not yet constructed, ranked as the most majestic edifice in Italy; and the form of its dome is supposed to have at least suggested that of the other more majestic one. The palaces, also, with the same character, have a similar uniformity; and many of them, erected during the ages of dire and deadly feud, exhibit, in their approaches at least, an attention to strength rather than to beauty. The Gallery is the chief pride of Florence, both as to its structure and contents. It has twenty apartments branching off from it, in each of which the productions of a particular school or class of art are exhibited. In ancient sculpture this collection has perhaps no rival, since it contains the Venus brought from the Medici palace, the group of Niobe, the Faun, and many other masterpieces. The paintings are so arranged as to form a complete history of Italian art, from the era in which it was a mere object of curiosity to that when it was displayed in its full splendour. It comprises also some of the greatest masterpieces of Raphael, Titian, Andrea del Sarto; and is adorned with some of those belonging to the principal schools beyond the Alps. The French, having selected and carried off sixty-three, left it completely shorn of its ornaments; but those have now all resumed their places. There are few paintings, but pretty numerous sculptures by Michael Angelo, especially those which adorn the tomb of the Medici.

Florence.

The environs of Florence are nearly as romantic as those of Rome, and not separated by any intervening desert, but rising in its close vicinity. Vallombrosa, a grand and solemn scene, where "Etrurian shades high over-arched embower," has been rendered classical by the immortal verse of Milton, who is supposed to have drawn from it his picture of Paradise, when he describes it—

> ——— "shade above shade,
> A woody theatre of stateliest view."

Fiesole, on an eminence, commands an enchanting view of Florence and the vale of Arno. Once the rival of that city, it is now a lonely and delightful village, and was the favourite spot to which the greatest men of Florence retired for the enjoyment of rural contemplation. Milton refers to the top of Fiesole as a happy point for observing the phenomena of the heavenly bodies. More remote, and approaching to the greatest height of the Apennine, the sacred hermitage of Camaldoli stands in a valley; but on the hill above are twenty-seven little mansions, each the abode of one monk, who, detached from the abbey, spends two years in austere and lonely retirement. Fourteen miles higher up, amid the most solitary and savage recesses of the Apennine, is the Franciscan convent of Lavernia, containing eighty friars. It is seated on a lofty rock, broken into numberless pinnacles, while thick groves, rising to the summit, and nodding over the steeps, cast a rich and mellow shade upon the whole scene.

Pisa, situated in a fertile and beautiful plain, was long one of the proudest and most prosperous of the commercial republics of Italy. Subjected by Florence, after a long contest, and now involved in the same common slavery, her wealth has disappeared, and her population has been reduced from 100,000 to 20,000. A solemn character of fallen grandeur still invests her. Her four edifices, the cathedral, the baptistery, the leaning tower, and the Campo Santo, form one of the grandest existing ranges of architecture, all built of the finest marble. The style is not altogether pure, being usually termed the Moresco Gothic; but Mr. Forsyth is rather of opinion that it is a mere corruption of the Greek model, retaining, however, much beauty. The cathedral is the most spacious and splendid of these edifices; but the campanile, or belfry, is the most remarkable. It is a tower of six successive stories of arches, supported by pillars. But its grand peculiarity is, that it has actually deviated fourteen feet from the perpendicular, yet has thus stood for 300 years, without the slightest tendency towards a fall. The deviation appears to have been in consequence of the softness of the ground, but it is a striking proof of skilful and solid construction, that this lofty edifice has not only remained firm for so long a period, but does not even now give the least menace of ruin.

Sienna, after acquiring a great name among the Italian republics, sustained a fate similar

to that of Pisa. It is situated in a hilly and even mountainous country; which, however, yields abundantly the olive, the vine, and in many places grain. The Monte Pulciano and Chianti grapes yield a wine superior to what is usually found in Italy. The southern district, however, consists of maremma, connected with the great Roman one. The nobles reside chiefly in the city, in the usual effeminate manner, and still retaining a remnant of those deadly feuds by which their order was formerly rent. It has some remains of the once extensive silk manufactory. Sienna had a respectable secondary school of painting, of which Vanni and Peruzzi were the heads; but its most remarkable monument is the pavement of its cathedral, the work of Micarino and other artists, who, by the mere combination of white and gray marble, hatched with mastic, produced the effect of the finest mosaic.

Leghorn is almost the only modern and prosperous town in the compass of the Tuscan territory. When ceded by Genoa in 1421, it was only a petty village; but the able arrangements of the Medici raised it to the rank it has since held as the first commercial city of Italy, and the great centre of Mediterranean commerce. It is airy and well built, with broad streets, fourteen churches, one Armenian and two Greek chapels, and even a magnificent synagogue; the necessary toleration of commerce overcoming even Italian bigotry. There are, however, no edifices which excite any recollections of antiquity, or can compare with those which adorn the other cities of Italy.

In the rest of Tuscany we may remark Cortona, the ancient capital of Etruria, supposed to be the most ancient city of Italy. The antique walls still remain as the substruction of the modern ones; and their vast uncemented blocks, which have subsisted for ages, mark the solidity of Etruscan masonry. Cortona is now reduced to 4000 inhabitants; but it is distinguished by the Tuscan Society, which has done much to illustrate the antiquities of Etruria. Perugia, also an ancient Etrurian state, is still a clean pretty town, delightfully situated on the lake of that name. Arezzo is a name rendered classic by the birth of Petrarch, of Redi, and of Pignotti. Bibbiena is a thriving little town, in the centre of the Casertine, inhabited by an industrious peasantry, who are reckoned to have the best hogs and the best chestnuts of all Italy.

SUBSECT. 4.—*Duchy of Lucca.*

Lucca, though an Etruscan city, is now governed by a duke of its own. It is one of the few Italian republics, which, amid the revolutions of 800 years, maintained its independence. The Lucchese reaped the benefit of this, in the superior education and more decent deportment of her nobles; in that agricultural industry, which, in a degree even beyond what appears in the rest of Italy, has converted a land liable to inundation, and destitute of many natural advantages, into a complete garden. The territory, though only forty-three miles in length, and twelve in breadth, two-thirds of which consists of mountain and defile, reckons a population of 145,000, being 334 to the square mile; a density which has no parallel, even in the most fertile plains of the rest of Italy. [On the death of the duchess of Parma, the duke of Lucca will succeed to that duchy, and Lucca will be annexed to Tuscany. The capital is Lucca, with 22,000 inhabitants.—AM. ED.]

SUBSECT. 5.—*Duchy of Parma.*

Parma, Placentia, and Guastalla, though they have been formed into a state for the empress of France, form in reality a complete appendage of Lombardy, and a continuation of its great plain, to the foot of the Apennines. They abound in the richest pastures, from which is produced that most celebrated of cheeses, to which Parma gives its name. The dukes of Parma, and especially the celebrated Alexander Farnese, have ranked among the first generals of Europe. The city of Parma, on a small river of the same name, is large, populous, airy, and clean. It does not contain any remarkable architectural features, except the theatre, modelled on the ancient plan, and perhaps the noblest in the world, but now in a state of decay; but Parma can boast a school of painting, one of the finest and most interesting that ever existed; in which grace was the predominant feature. The chief masters were Correggio and Parmegiano, whose works in fresco adorn the walls and cupolas of the churches in Parma; and the oil pictures, which the French carried off, have now been restored. Population, 30,000. Placentia, with 28,000 inhabitants, is also a large and well-built city; but its celebrated amphitheatre, which surpassed that of Verona, was burnt to the ground in one of the furious civil contests which laid waste Italy. The banks of the Trebbia, in its vicinity, have been the scene of two of the greatest battles recorded in history; one gained by Annibal over the consul Sempronius; the other by Suwarrow over Marshal Macdonald, which decided for a time the fortunes of Italy.

SUBSECT. 6.—*Duchy of Modena.*

Modena is a fine small domain, composed of a rich plain at the foot of the Apennines. It is held as a fief of Austria, and by a branch of that family, with the title of duke. The city of Modena, the ancient Mutina, is extremely handsome, though without any objects peculiarly striking. It has a population of 27,000 souls. It was enriched by the family of Este with

splendid collections of books and paintings; but the latter have been now removed, by purchase, to adorn the Dresden gallery. The territory of Massa-Carrara, held by the Archduchess Maria Beatrix, fell, on her death in 1832, to Modena.

Subsect. 7.—*The Lombardo-Venetian Kingdom.*

Austrian Italy, or the Lombardo-Venetian Kingdom, consists of the great plain of the Po, bordered on one side by the highest ranges of the Alps, on the other by those of the Apennines. It has not the classic sites and monuments of Rome, nor the brilliant skies of Naples; yet it would be difficult to find on the globe a territory of the same extent equally fine. The luxuriant fertility of this vast plain; the grand, almost magic, landscapes presented by the southern declivity of the Alps, and the lakes which spread at their feet; the fine shores of the Adriatic, unite in making it one of the most desirable regions of Europe. It is an aggregate of several portions that were politically very distinct. The duchies of Milan and Mantua were always ruled by feudal sway, and under a dependence on the German empire; but Venice, the greatest and mightiest of the republics which rose when Europe began to emerge from the darkness of the feudal ages, continued long the equal and rival of the greatest monarchies. This high pre-eminence gradually departed with the energies by which it had been supported; and Venice, as a republic, was little more than a phantom, when the French revolutionary force first subverted it, and afterwards basely, but in just reward of its pusillanimity, delivered it over to Austria. Afterwards, through the ascendency of Bonaparte, the whole of Lombardy was absorbed in his kingdom of Italy, of which Milan was made the capital seat. Subsequent and well-known events reversed all these arrangements; and this part of Italy was restored entire to Austria. That power, in 1815, erected the whole into what was called the Lombardo-Venetian Kingdom, and granted to it a certain form of representative constitution. The members are chosen partly by the landed proprietors, and partly by the nineteen royal cities: they form two central congregations, meeting one at Milan, and the other at Venice. The election, however, is limited, the government choosing out of a list of three presented to it, and even claiming the right of expunging from the office of elector such as it deems unworthy to exercise it. This body has the distribution of the taxes, and also of the military levies over the different districts; though the general amount of both is determined, without any reference to them, by the court of Vienna. It has the superintendence of public works, charitable establishments, and other local objects; and may propose the means of raising funds for their support. These privileges, such as they are, no doubt produce great benefits to the country; though, as the congregation has not even a negative voice in the making of laws and imposing taxes, it can fulfil very imperfectly the representative functions. It is also a subject of complaint, that all offices, even judicial, are exercised by Germans, a nation whom the Italian hates and despises as barbarian. The state of agriculture, and of the other branches of national industry in Lombardy, has been sufficiently illustrated in describing those of Italy in general, in which it forms so prominent a part.

Government of Milan. Population, 2,280,063. Principal towns:—Milan, 151,000; Brescia, 31,000; Cremona, 26,000; Mantua, 25,000; Pavia, 21,000; Lodi, 18,000; Como, 7600.

Government of Venice: 1,957,229. Principal towns:—Venice, 101,000; Verona, 55,000; Padua, 50,000; Vicenza, 30,000; Udina, 18,000; Treviso, 15,000; Belluno, 8000; Rovigo, 7000.

Milan is a noble city, which ranks almost as the modern capital of Italy. Its situation in the middle of a superlatively rich and beautiful plain, watered by the Po, at a point where all the great canals meet, and on the high road from Germany by the lakes Maggiore and Como, render it a sort of key to the northern part of this kingdom. Its modern greatness preceded that of most of the other cities; and under the Sforzas and Viscontis it became the grand theatre of debate between France and Austria. Its greatest splendour, however, was attained under the régime of France, when it became the capital, first of the Italian republic, and then of the kingdom of Italy. Napoleon spared no expense in erecting edifices which might dazzle the eyes of his new vassals. The Duomo, (*fig.* 364.) begun in the fifteenth century, under the Viscontis, and slowly carried on by successive benefactions, had been left more than half unfinished; so that the French had the greater part of its magnificent front to execute. It is the only very superb edifice of this description which may be said to belong to the present age. In extent and pomp it ranks second to St. Peter's; though the design has been criticised, especially as to the four hundred statues which are ranged along the façade. It is 454 feet long, 270 wide: the height of the cupola is 232, and that of the tower 335 feet. The French have also erected a very magnificent amphitheatre, completely on the antique model, in which

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Milan Cathedral.

from 30,000 to 40,000 spectators can be accommodated. Chariot races and national games have been repeatedly performed within its precincts. A superb triumphal arch was commenced on the Simplon road, in commemoration of the stupendous labours by which that passage over the Alps was formed; but since the fall of Napoleon no further progress has been made. The theatre Della Scala is the only very fine one in Italy, as it was only in Milan, and during the last century, that the Italian drama acquired any degree of splendour. The opera of this city is accounted inferior to that of Naples; but the ballet is the finest in Italy, and consequently in the world. A more interesting and classical scene is presented by the Brera, or palace, formed out of the ancient convent of the Humiliati. Here the French deposited the finest paintings which could be procured by purchase or otherwise from every part of Italy, including those brilliant productions of the Bolognese schools, which had adorned the Zampieri palace. The Last Supper of Leonardo da Vinci, one of the greatest masterpieces of modern art, and long the pride of Milan, is now almost entirely faded, and scarcely known but by engravings, and by a very fine copy, in mosaic, made by the French. The Ambrosian library, formed by Cardinal Frederic Borromeo, on the basis of the Benedictine collection, consists of 90,000 volumes and 15,000 manuscripts, and is well known to the world by the learned researches and discoveries of Angelo Mai. Milan has an infirmary for 3600 sick, and a foundling hospital for 4000 children. It covers a great space of ground, and has some very spacious squares; but the streets in general, like those of other old cities, are narrow and crooked, and far from handsome. Several of those called *corsos*, however, which form the entrance into the city, have been greatly improved.

Venice (*fig.* 365.), though now reduced to a secondary rank, compared with Milan, is a more celebrated and still a much more beautiful city. This once great republic, into which flowed the commerce and wealth of the East, which ruled the Mediterranean, sacked the imperial city, and set bounds to the Ottoman power at a moment when it seemed ready to overwhelm all Europe, is now, after a duration of thirteen centuries, for ever extinguished. Its fall without a struggle was, doubtless, prepared by a decay of its moral energies. The nobles who once swayed the councils of Venice, and commanded her fleets, had no longer any object but to attend public processions, to pay court to their lady, to while away the evening at her casinos, and to heighten the gay license of the carnival. The people, enslaved, had lost all national spirit. The republic, with all its bright series of triumphs, is now an empty name; but Venice remains, however, next to Rome, the finest of all the Italian cities. It cannot, indeed, boast of any classic monuments, nor are its churches built in so lofty a style; but its palaces, the gay architecture of Palladio, present a range of the finest private mansions that were ever erected. The effect is greatly heightened by its situation, on seventy islets of the Adriatic, partly on the rock, partly on piles sunk into the sea, and a marine channel, instead of a pavement, perforating every street. Scarcely is there room left for a foot-passenger; the Venetian is conveyed in the gay gondola from palace to palace. Thus Venice appears rising from the waters, with its numberless domes and towers; and, attended by several smaller islands, each crowned with spires and pinnacles, presents the appearance of a vast city floating on the bosom of the ocean. The row of magnificent but decaying palaces which extend along the grand canal, with their light arabesque balconies and casements, their marble porticoes, and peculiar chimneys, present one of the most superb and singular scenes in the world. They stand in majesty of ruin, and exhibit the most affecting combinations of former splendour and present decay. The most commanding objects are those round the square of St. Mark, the most magnificent public place in Italy. The church of St. Mark rivals in splendour any edifice in that country, or in Europe. But this pomp is gloomy and barbaric: the five domes which swell from its roof, the crowded decorations which cover its porticoes, give it the appearance of an Eastern pagoda. Its mixed orders, Greek, Saracenic, and Gothic, are beautifully but barbarously blended, and glitter with incrustations of gold, gems, and marbles. The interior is enriched with the spoils of Constantinople and the East, the monuments of long ages of glory. The most classic plunder is that of the four bronze horses of Lysippus, which stand on the portico facing the piazza. After remaining there six hundred years, they were removed to the Tuileries, but are now replaced. The figure of a lion, emblematical of the evangelist St. Mark, stands on the second arch. One side of the square is lined by the ducal palace, a fabric of vast extent and solidity, built in the Gothic and Saracenic style. The stranger beholds with emotion the halls where the senate, and the dreadful Council of Ten, formerly sat; and which, as well as the other apartments, are adorned with the finest

Venice.

works of the Venetian painters. The Rialto, a bold marble arch thrown over the most magnificent part of the great canal, excites universal admiration. The arsenal occupies an island by itself, and is strongly fortified, spacious, and commodious, wanting nothing but shipping and naval stores. The churches, the palaces, and the *scuole* or halls of the different corporations, are embellished with the finest paintings, both in oil and fresco, of the great Venetian painters, Titian, Paul Veronese, Tintoretto, and the Palmas. This school, as is well known, surpassed all others in colouring, though it did not reach the grand design and expression of the Roman. Venice is the birth-place of Canova, the greatest of modern sculptors, and contains some of his works.

The Venetian territory can boast several renowned cities. Padua, which is said to have been founded by Antenor, and to have attained considerable magnitude before the existence of Rome, gained celebrity in modern times as a seat of learning. Its university was only rivalled by that of Bologna, and attracted 18,000 students; yet, though it has still forty-five professors, and affords ample means of acquiring knowledge, the scholars were in Eustace's time reduced to 600; and, according to Hassel, in 1817 they did not exceed 300. Galileo, Vesalius, and Morgagni, were among its professors; Livy, and the modern historian Davila, were born there; and Petrarch is buried at Arquà, in the vicinity. The city is divided into two parts: the old, composed of dark narrow streets, and high old palaces; and the modern, adorned with the splendid architecture of Palladio. The university, and the church of Justina, belong to the latter, and are fine edifices. Vicenza, the birth-place of Palladio, has been adorned by him with about twenty palaces, perhaps the most beautiful in Italy, besides other public buildings, among which the Olympic Academy, founded for the cultivation of literature, deserves particular mention. Verona, an ancient and still a large city, the close ally rather than the subject of Venice, attracts admiration by its ancient amphitheatre, the largest remaining except the Coliseum, to which it is inferior in size only. In recent times Verona has attracted notice as the seat of a congress, which disposed of the fate of Italy. Brescia and Bergamo are considerable towns in the lower Alpine districts, but more remarkable for industry and manufactures, of which they still retain a considerable share, than for splendour or embellishment.

Among the other cities of Lombardy, Mantua takes the lead: it is still large, and forms one of the strongest fortresses in Italy. Pre-eminently classical as the birth-place of Virgil, it made a considerable figure in modern times, both as a republic and under its dukes of the house of Gonzaga. Cremona, the birth-place of Vida, is a large and well-built city, containing many handsome edifices. Pavia is the seat of an ancient university, supported and attended by 600 or 700 students. It is still better known by the great battle fought in its vicinity between the French and Germans, in which Francis I. was totally defeated and taken prisoner. Lodi is a large fortified town, distinguished as the seat of one of Bonaparte's most splendid victories.

Subsect. 8.—*States of the King of Sardinia.*

The Sardinian States are of a very dissimilar character, but united by political circumstances under one government. The dukes of Savoy, founders of the Sardinian family, made a conspicuous figure in European history, especially during the war of the Spanish succession. In return for their services to the cause of the allies, they were recompensed with the island of Sicily. That island was afterwards, in consequence, it should seem, of a very bad bargain, exchanged for Sardinia, from which the house assumed the royal title. Under the domination of Napoleon, the king was expelled from all his Italian territories, and owed to British protection alone the preservation of Sardinia. After the triumph of the allies, he was not only replaced in all his former possessions in Italy, but the state of Genoa, instead of being restored to its lost independence, was subjected to his sway. The kingdom of Sardinia consists, therefore, of four distinct parts,—Piedmont, Genoa, Savoy, Sardinia.

Population in 1825.	Principal Towns, with their population.
Savoy.....501,165.	Chamberry, 12,000; Annecy, 5500; Morienne, 2500.
Piedmont,..591,929.	Turin, 114,000; Alessandria, 35,000; Asti, 22,000; Mondovi, 17,000; Vercelli, 16,000; Nice, 25,000; Coni, 18,000; Novara, 15,000; Voghera, 10,000
Genoa,..2,563,223.	Genoa, 80,000; Savona, 10,000; Novi, 8000.
Sardinia...490,050.	Cagliari, 27,000; Sassari, 19,000.
4,165,377.	

Piedmont, or the "foot of the mountains," is the most valuable possession of this crown. It forms a continuation of the plain of Lombardy, somewhat narrowed, and more closely bounded by the mightiest ranges of the Alps and Apennines; the former on the north and west, the latter on the south. The Po, running through its centre, divides it into two nearly equal parts, and receives here all its early tributaries; which, being so near their mountain sources, are liable to sudden and terrible inundations, distressing to the agriculturist and dangerous to the traveller. The chief produce is silk, which is reckoned superior to any other in Italy, and consequently in Europe; and in Turin and some other cities remains exist of very extensive silk manufactures: but the greater part of the produce is exported raw. The government is absolute, but tolerably mild; and a recent attempt to establish a constitutional form was speedily crushed by Austrian interference.

Turin maintains its place among the beautiful cities of Italy. Its situation is as fine as possible, amid the rich valley of the Po, surrounded by an amphitheatre of vine-covered hills; while lofty mountains, with their summits clad in perpetual snow, tower in the distance. The streets are long and regular, ornamented with lines of porticoes, and opening at their terminations to fine views over the surrounding country: it is a little city of palaces. The churches and mansions are spacious, and of rich materials: but few display that classic taste in which real beauty consists, and which ennobles the Roman and Venetian structures; the vases of pure gold, the silver images, and the crosses of ruby, were all converted by French avidity into current coin. The most striking edifice is the church of the Superga, built on the steepest hill which crowns the city. The ancient palace of the dukes of Savoy is a huge brick edifice, resembling a fortress rather than a palace. Turin has a considerable number of paintings, not marking any particular school, as none ever arose in this part of Italy, but chiefly composed of Flemish and other ultramontane productions. The university is very extensive, and contains important collections, among which those of natural history, natural philosophy, medals, and antiques, are particularly noticed. The library is also rich in curious works and valuable manuscripts. The citadel of Turin forms a very strong fortress.

The other cities of Piedmont are chiefly remarkable for their strength, having been erected when this country was a seat of almost perpetual war. The strongest is Alessandria, built in the twelfth century, at the junction of the Bormida and the Tanaro. It is large and very strong; beside which the town is the seat of extensive fairs. Near it is the celebrated field of Marengo. The once strong fortifications of Tortona have been demolished. Vercelli, the former capital of this part of Italy, and distinguished by some fine structures, is now thinly inhabited and dreary. Novara is a gloomy antique frontier town towards Lombardy. Coni, among the Alps, is considered the bulwark of the kingdom on the side of France. Susa, once the capital of Piedmont under its marquises, is a retired pleasant little town, on the immediate frontier of France. Nice is the capital of a little country scarcely Italian, being beyond the Alps. Though it cannot be said to be well built, it is agreeable; and, as the environs are beautiful, and the air mild, it is a frequent resort of English invalids.

The territory of Genoa is situated on the sloping steeps of the Apennine, where it separates from the Maritime Alps, and stretches eastwards; not seprated from the sea by a broad plain, as in the rest of its line, but presenting to it narrow valleys and mountain declivities facing the south. These steep barriers are passable only at a few points, and the Bochetta, a very steep and lofty defile, forms the only practicable approach to Genoa from the interior. This district, the country of the ancient Ligurians, is not favourable for the operations of the plough; but olives in abundance, silk, and tolerable wine, are advantageously produced from it.

Genoa (*fig.* 366.), surnamed the Superb, the great naval republic which, in the annals of Italian wealth, commerce, and splendour, ranked only, and scarcely second to Venice, presents but a shadow of her former greatness. Her navigators were of a peculiarly bold and adventurous character; and she was the native city of Christopher Columbus. Her settlements in the remote peninsula of the Crimea, enabled her to bring into Europe, by a peculiar and circuitous route, the commodities of India. Depressed by a once haughty, and now indolent aristocracy, and eclipsed by the rivalry of the northern nations, Genoa had lost all her principles of prosperity, before her independence was crushed by the revolutionary arms of France. Yet it seems impossible to applaud the conduct of the Allies, in annexing her to Sardinia, though with permission to preserve her senate and outward forms of administration. Genoa ranks now below Leghorn as a port; yet her industry is not wholly extinguished. She still manufactures rich velvets, damasks, and satins, to the value of from 200,000*l.* to 300,000*l.*; and about a hundred and fifty vessels are employed in exporting these, with the produce of her own territory and of Piedmont. The wealth of the great days of Genoa was as usual embodied in palaces. These are arranged in one continuous line of street, extending under three different names through the city, all the rest of which is a mere chaos of dark and dirty lanes. These palaces are boasted as being, for richness of materials and profuse ornament, the most splendid in Italy, and many of them are every way fit to be the residence of the greatest monarchs. They have one ornament peculiar to themselves, which consists in fresco paintings on the exterior of the walls, many by masters of some eminence; and, in this fine climate, these remain

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Genoa.

unimpaired for centuries. The design, however, both here and in the churches, wants that elegance and purity of taste by which the structures of Venice have been rendered so admirable. Ornament and glare seem to have been the ruling passion of the Genoese. Her nobles, though all sunk, and many reduced to poverty, would spend their last farthing in supporting the pomp of their ancient mansions. Hence these have now a silent and desolate aspect, and have been compared to the ruined monuments of an excavated city. They are filled with pictures, gilding, arabesques, frescoes, dust, moths, and dirt; exhibiting a combination of ancient splendour and present decay. Genoa has not altogether the magical effect produced by the long lines of canal which intersect Venice; but her position, occupying one side of the spacious amphitheatre which forms the harbour, and spreading her streets and churches, and then her suburbs and villas over a vast semicircular tract of crags, rocks, and declivities, gives her, towards the sea, a highly magnificent and imposing aspect. The city has also the disadvantage of being so closely bounded by rocks, that no level spot is left on which a carriage can drive; and the neighbouring villas can be reached only in chairs carried by a species of porters, endowed with singular agility and alertness.

Savoy is a province of considerable extent, which in its surface and aspect is much more analogous to Switzerland than to Italy: it consists of rugged rocks, and mountains rising into regions of perpetual snow; interspersed, however, with a number of fertile and agreeable valleys. Some of the principal passes over the Alps into Italy are through Savoy, which till lately was the only one from France or Switzerland that was passable for carriages. The Little St. Bernard, by which Hannibal is now generally supposed to have passed, is also situated in Savoy. It was much improved by Napoleon. Many of these rocks, composed of loose limestone strata, are perpetually crumbling. In 1248 a great part of Mont Grenier, near Chamberry, fell, burying a village and church, and overspreading the surface of five parishes, which are still covered with the fragments piled in small conical hillocks. Mont Blanc, the loftiest mountain in Europe, is within the limits of Savoy; but as it is approached by way of Geneva, and forms part of the most elevated range of the Alps of Switzerland, we prefer including it in the description of that country. The Savoyards are brave, industrious, poor, more social than the Swiss, though less noted for cleanliness. The towns in this elevated district are agreeable and rural, situated in its most fertile and open plains, but do not attain to much magnitude or importance. Chamberry, on the high road into Italy, is an old town, somewhat gloomy, but not ugly, and in the midst of a variegated and beautiful country. Moutiers, capital of the high district of Tarentaise, and Annecy, at the extremity of a picturesque lake of the same name, are pleasantly situated, though not well built places.

The island of Sardinia is one of the least valuable portions of the kingdom, though possessed of advantages which should render it very much the reverse: few regions exceed it in natural fertility; the surface is finely variegated with gentle hills, which only along the western coast assume the character of mountains. Grain, notwithstanding the most wretched cultivation, affords a surplus for export. The wines are reckoned equal to those of Spain, and the olives to those of Genoa and Provence. The salt-works and the tunny fishery are very important objects; and the situation of Sardinia, in the heart of the Mediterranean, and with a number of fine harbours, might afford the opportunity of an extensive commerce. Yet the population is in the most uncultivated and savage state, perhaps, of any in Europe. The peasantry in the interior are clothed, in a great measure, in shaggy goat or sheep skins; they subsist chiefly by the produce of their flocks, and by hunting; and go constantly armed, for their own defence, against the numerous and desperate banditti, by whom the mountains are infested. The Sardinian government appears really to have made very extraordinary exertions for this its rude appanage. The want of roads, and the extensive commons, were considered the two chief causes which perpetuated its evils. A plan was, therefore, traced to form one great road across the kingdom from north to south, between the two leading points of Cagliari and Sassari, from which eight cross-roads might branch off so as to embrace the most important points in the east and west. The principal road was begun in November, 1822, and was expected to be completed in December, 1826. Laws were also passed to authorise and encourage the division of commons. The good effects of these measures, however, are as yet only prospective. At present, Sardinia has the tunny fishery, the produce of which varies much with the state of the wind, and other circumstances. In 1816, it amounted to 17,500 fish; in 1822, to only 3500; in 1823, to 11,000; and in 1824, to 5300. Sea salt, evaporated by the heat of the sun in the shallow bays near Cagliari, Palmas, and Oristano, is employed in salting both meat and fish, and as an object of direct exportation. Grain, produced to the amount of nearly 3,000,000 bushels, was formerly the principal object of export; but its value has been of late greatly reduced by the competition of Odessa. The horses are of a good breed: according to M. Cibrario, 32,000 only are tame, and 20,000 wild. He gives a still more striking picture of the rude state of the country when he adds, that of the cattle, 120,000 are tame, and 350,000 wild; and that, of 840,000 sheep, the whole belong to the latter class. There is, however, a considerable export of salted meat and cheese.

About a third of the surface consists of forest, a considerable portion of which is oak, and well adapted for shipbuilding. Cagliari and Sassari are both considerable cities; the former having a considerable trade, but crowded, ill built, and ill paved; the latter smaller, but more elegant: both have universities, with tolerable libraries. Oristano has a fine harbour, and flourishes by the tunny fishery, and by the culture of wine in its neighbourhood.

SUBSECT. 9.—*Principality of Monaco.*

This little state, comprising 6500 inhabitants, on 50 square miles, is situated within the Sardinian territory. The capital is Monaco, a village with 1000 inhabitants. The principality of Monaco is under the protection of the king of Sardinia.

SUBSECT. 10.—*Kingdom of Naples, or the Two Sicilies.*

The kingdom of Naples, or, as it is called, of the Two Sicilies, is the most considerable in Italy for extent and population; in which respects it approaches to the rank of the great monarchies; but the supine and indolent character of its government almost prevents it from having any weight in the political system. Neapolis, though a place of some consequence under the Romans, was not until the middle ages a kingdom, in which the republican spirit, so active in the north of Italy, was early subdued. Naples was successively governed by branches of the house of Austria, and of the Spanish Bourbons, which last is now on the throne. On the approach of the French revolutionary army in 1795, Naples yielded without any resistance, except that spontaneously made by the despised lazzaroni. During the greater part of the revolutionary war, the king was supported in Sicily by a British fleet and army, and on the triumph of the allied cause, was reinstated in all his territories. With the exception of a short and abortive attempt to establish a constitutional system, the government has always been absolute; yet the people suffer less from the oppression of the crown, than from the exorbitant privileges of the nobles. The accession of Sicily, in exchange for Sardinia, effected in 1720 through Austrian influence, rendered the kingdom much more valuable and compact. These two members are, however, so very distinct, that it will be necessary to consider them separately.

Naples, the southern extremity of Italy, after forming for some space a continuation of the long narrow peninsula which comprises most part of that country, branches finally into the two smaller peninsulas of Otranto and Calabria. The Apennines fill its interior, shooting out branches to its bounding promontories; they in many places spread wider, and assume still more rugged and awful forms than in the northern part of their line; and they harbour the most formidable troops of banditti which infest Italy. They leave, however, along the coast, wide plains and extended valleys, blessed with the most genial climate, and the richest soil of any country in Europe, or, perhaps, in the world. The culture, also, notwithstanding various administrative defects, is so diligent as to support a very numerous and very dense population.

[Provinces.	Population, 1825.	Principal Towns.
Naples	689,030.	Naples, 364,000; Castellamare, 15,000; Torre del Greco, 13,000.
Abruzzo Ulteriore Primo	174,372.	Teramo, 9,000.
Abruzzo Ulteriore Secondo	259,114.	Aquila, 8,000.
Abruzzo Citeriore	260,250.	Chieti, 13,000.
Terra di Lavoro	602,296.	Caserta, 5,000; Aversa, 16,000; Nola, 9,000.
Principato Citeriore	478,450.	Salerno, 11,000; Nocera, 7,000; Cava, 19,000.
Principato Ulteriore	349,637.	Avellino, 13,000.
Capitanata	265,624.	Foggia, 21,000.
Molise	317,002.	Campo-Basso, 8,000.
Terra di Bari	384,497.	Bari, 19,000; Barletta, 18,000: Trani, 14,000.
Terra d'Otranto	341,510.	Lecce, 14,000; Tarento, 14,000.
Basilicata	421,267.	Potenza, 9,000.
Calabria Citeriore	382,919.	Cosenza, 8,000.
Calabria Ulteriore Secondo	284,027.	Catanzaro, 11,000.
Calabria Ulteriore Primo	246,669.	Reggio, 17,000.

AM. ED.]

Naples (*fig.* 367.) is the largest city in Italy, and fully maintains its place among the most beautiful European capitals; this is not owing to its architecture; for though the edifices

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Naples.

are lofty and solid, the streets tolerably wide, particularly the Strada di Toledo, which is a mile in length, yet all the particular buildings are characterised by that bad taste which has always ruled at Naples, and to compensate for which, marbles, gilding, and decoration, have been vainly lavished on its churches and palaces. Taken collectively, however, Naples presents to the sea an immense line of lofty edifices, producing a general pomp of effect, and forming a commanding feature in the matchless landscape. Its bay, occupying a wide circuit of sixteen miles, everywhere bounded with vineyards, hills, woods, convents, villages; the golden shores of Baiæ, the beautifully variegated islands of Ischia and Procida, with the verdant sides and lofty cone of Vesuvius: all these, viewed under a brighter sun than ever shines in the regions beyond the Alps, have been considered as composing the most splendid picture which nature presents to the human eye. The interior of Naples exhibits a most singular living scene; every trade and every amusement being carried on in the open air. "The crowd of London," says Forsyth, "is a double line in quick motion; it is the crowd of business. The crowd of Naples consists in a general tide rolling up and down, and in the middle of this tide an hundred eddies of men. You are stopped by a carpenter's bench, you are lost among shoemakers' stools, you dash among the pots of a maccaroni stall. Every bargain sounds like a battle: the popular exhibitions are full of grotesque; they consist of Punch held as the representative of the nation; of preaching; selling Agnus Deis; dancing to the guitar; or listening to old tales." The higher classes are generally accused of licentiousness, though Eustace thinks the charge somewhat exaggerated. A very literary spirit prevails; the Neapolitans boast that as many books are published at Naples as at Paris; and that, if the world would judge impartially, they would find the one as good as the other: but this opinion does not prevail in other countries. Most ample opportunities of study are certainly afforded, by four libraries open to the public; one of which, compounded of the Farnese and other libraries transported from Rome, comprises many curious and valuable works. With these were conveyed some of the finest specimens of ancient sculpture, and some fine specimens have been appended from the greatest Italian schools; but Naples could boast no great painters of its own, and has, therefore, no frescoes of any importance. One bright redeeming quality in the Neapolitans is charity: their hospitals are numerous, richly endowed, and supported by ample benefactions; and persons of the first rank, assuming the dress of religious fraternities, not only superintend these establishments, but watch the sick-bed of the patient. The Neapolitans set an example, which seems worthy of imitation, in having a rural hospital for recovering the health of invalids. They have also *conservatorii* or schools, where the children of the lower ranks are initiated in trades, by which they may gain their subsistence. A great part of these is devoted to the teaching of music; and is unfortunately combined with that horrid mode of attaining excellence in it which is peculiar to Italy, and which, though prohibited by the government, continues still to be practised. Naples may be considered as the musical capital of Italy: the greatest composers have been its citizens; and its opera is unrivalled.

The environs of Naples present a combination of all that is most beautiful and all that is most terrible in nature; they extend along the western shore from Naples to Miseno, which forms the termination of the bay. One of the chief ornaments is the mountain of Posilippo (*fig.* 368.)

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Posilippo.

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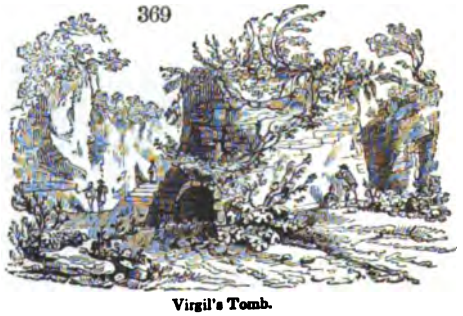

Virgil's Tomb.

which spreads its varied outline for several miles along these enchanting shores. Its promontory is variously broken into bays, islands, and caverns; but the object which above all attracts the traveller, is the Grotto. In one of the wildest and most picturesque recesses of its romantic defiles opens this famous artificial excavation, which penetrates through the mountain for three quarters of a mile on the way to Puzzuoli. Baiæ, viewed by the Romans as the most enchanting spot on the earth, was absolutely crowded with the villas of their great men. Here was the academy of Cicero, the favourite haunt of Virgil, the palace of

Lucullus, and afterwards, unfortunately, the scene of the brutal voluptuousness of Tiberius and Nero. The lake of Avernus, and the Elysian fields, are neither so dreadful nor so beautiful as their names would import. The tomb of Virgil (*fig.* 369.), on one of the most beautiful heights of Posilippo, excites, perhaps, stronger emotions than any other of these objects. This, however, is the subject of a serious controversy: Addison, Forsyth, and Matthews reject it as wholly apochryphal; but Eustace contends that the long and constant chain of tradition cannot be disproved by the doubtful authority which places it on the opposite side of the bay. Further on, the village of Puzzuoli occupies the celebrated site of the ancient Puteoli, where the remains of an amphitheatre and a temple of Jupiter almost vie with the monuments of Rome. The beauty of this region, however, is gloomily mingled with the terrible indications of ancient conflagration. The Solfatara, a naked plain, surrounded by a rampart of shattered hills, is evidently heated by a subterraneous fire, sensible to those who pass over it, by whom the workings of the furnace beneath are distinctly heard. When struck, it rebellows in hollow murmurs; sulphureous exhalations rise from the crevices; and a pale blue flame is seen issuing by night from an orifice in this ever-burning plain (*fig.* 370.). The quarries of the peculiar stone called Puzzolana, which is used in

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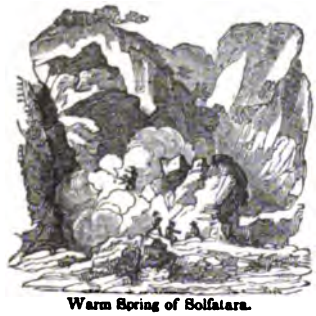

Warm Spring of Solfatara.

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Quarry of Puzzolana.

several manufactures, present a striking and picturesque aspect (*fig.* 371.). The Grotto del Cane is a small aperture, whence issues a vapour so strongly impregnated with carbonic acid as to be deadly to all who breathe in it. Near it are several natural vapour baths, used with success in the cure of diseases. The Lucrine Lake, on which the ancients had erected several magnificent edifices, was nearly filled up in one night by the Monte Nuovo, a black mass of Scoriæ and ashes, which rose suddenly from the bosom of the waters. The city of Cumæ is now a miserable village; but the celebrated grotto of the Sibyl may still be discovered, with some remains of those subterraneous galleries, by which she was enabled to form the awful sounds which in the moment of inspiration issued from the depths of the

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Sorrento.

cavern. Sorrento (*fig.* 372.), a little port on the extremity of the bay, is admired for its beautiful scenery, and the striking aspect of its volcanic rocks.

Vesuvius, about eight miles from Naples, with an arm of the bay interposed, rears her majestic cone, the only volcanic mountain on the continent of Europe, and one of the most active in the world. From the earliest ages on record, its eruptions have occurred at intervals of a few years; and those of 1794 and 1822 caused a considerable diminution of its height, large portions from the sides of the crater having fallen in. On these occasions the lava issues forth in vast streams, overspreading the country for miles, and burying even cities. The town of Torre del Greco was overwhelmed in 1794; but the most memorable

catastrophe of this nature was that which, in the first century, befell the two cities of Herculaneum and Pompeii, which were completely buried beneath torrents of lava. They remained entombed for ages, till the beginning of the last century, when a peasant, in digging a well, discovered some fragments of marble, and by degrees a small temple, and some statues; but this observation was neglected till the king, in 1736, designing to erect a palace at Portici, purchased the ground, and began to make large excavations, in consequence of which the entire subterteranean city appeared beneath (*fig.* 373.). Numerous paintings, in perfect preservation, and manuscripts written on papyrus, have been found amid the ruins. The operations have been limited by the depth of the lava, and by the city of Portici being built above. About 1750, Pompeii was discovered; and being found much more accessible, very extensive excavations have been effected, particularly by the French; and travellers may now walk through a great extent of the ancient Pompeii (*fig.* 374.). It exhibits the full picture of what a Roman city was: habitations, temples, theatres, baths, the shops of the different trades, the implements they used, and even the materials on which they were employed.

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Herculaneum.

Salerno (*fig.* 375.), on the opposite side of the bay, is a pretty large town, in a beautiful and fertile territory, enclosed by ranges of lofty mountains. Considerably to the south, on a plain near the sea, appear the remains of Pæstum, the ancient capital of Lucania. They consist of three temples, which form perhaps the purest and most perfect specimen extant of the Grecian Doric order. They stand solitary near the sea-shore, without the least remains of Posidonium, the city to which they belonged.

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Entrance to the principal Street of Pompeii.

The northern part of Naples is divided between the Campagna Felice of the ancients,

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Salerno.

now Terra di Lavoro, and the rough mountain territory of the Abruzzo, the ancient Samnium. Campania is still both fruitful and highly cultivated, though it no longer produces the Falernian wine, so boasted of by the voluptuous poets of Rome. Capua, which almost disputed the title of capital of Italy, and whose voluptuous pleasures ruined the army of Hannibal, after it had vanquished all the armies of Rome, is now only a considerable but dirty town, with a strong castle. Gaëta has derived great importance from its position on an almost peninsular neck of land, the approaches to which are so strongly fortified, as to render it almost impregnable. Benevento, a town of ancient celebrity, afterwards the seat of a Lombard dukedom, which extended over almost all Naples, is filled with monuments interesting to the antiquary. The people of the Abruzzi, the descendants of the ancient Samnites, who made such a formidable resistance to Rome, and repeatedly sent her armies under the yoke, are still a brave and laborious race. The capitals, Aquila and Chieti, are considerable country towns, without any thing remarkable. Foggia, in Capitanata, is a considerable market for wool and corn, which are exported at Manfredonia. In the southern provinces, the mountains take an easterly direction towards Calabria, and have between them and the

Adriatic the plains bearing the classic appellation of Magna Græcia. This region, once the combined seat of learning, greatness, and voluptuous effeminacy, is now almost unknown to the rest of Europe. Yet the scenery possesses a softness and beauty, mingled with grandeur, that is scarcely equalled elsewhere; and the towns, though they cannot be compared with the great capitals of Italy, present striking and interesting monuments. Tarento (*fig.* 376.), once rival to Rome, is still a considerable sea-port. Brindisi retains only a small remnant of the importance which it derived from being the port of passage from Italy into Greece. Bari and Barletta are modern and rather handsome and flourishing sea-ports. Polignano, to the south of Bari, is also considerable, and its vicinity is marked by some very singular and beautiful grottoes (*fig.* 377.) Gallipoli is the chief mart of the oil produced in this region, which is esteemed above every other for the manufacture of fine woollen cloth. Corigliano (*fig.* 378.), nearly on the site of Sybaris, presents an aspect strikingly picturesque. The plain of Sybaris, behind it, the abode of a people noted for voluptuous indulgence, appears, by the description and delineation of St. Non, to be of almost unrivalled beauty. It is diversified with rich groves of orange and citron, above which rise finely cultivated hills; while the distance is formed by the mountains of Calabria, capped with almost perpetual snow (*fig.* 379.)

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Tarento.

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Grottoes of Polignano.

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Corigliano.

Otranto (*fig.* 380.), the ancient Hydruntum, is a small town, distinguished only by its spacious castle, which has been celebrated even in romance.

Calabria, on the opposite side of this southern extremity of Italy, is a striking and singular region. The Apennines here tower to a stupendous height, and leave between them and the sea only a narrow but extremely fertile plain. The inhabitants bear in a great measure the character of mountaineers: they are poor, brave, rude, and

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Plain of Sybaris.

almost bandit. They are often in opposition to the government in its attempts to maintain order and peace; yet, when they saw it invaded, and even conquered, by a foreign enemy,

380

Otranto.

they opposed a formidable resistance, after all the regular troops and ordinary resources had failed. Calabria possesses a fatal distinction, in having exhibited the phenomena of earth-

quake on a more terrible scale than in any other part of Europe, or perhaps of the old world. During successive weeks the whole ground heaved with a perpetual agitation: hills were levelled, and plains raised into hills; lakes were filled up, and new ones formed. An unfortunate party, which sought refuge on the sea-shore, were overwhelmed, in consequence of the sudden partial fall of a high mountain. Reggio, the ancient capital of the Rhegians, situated almost directly opposite to Messina, presents interesting remains of antiquity, and derives also a considerable animation from modern commerce. Squillace (*fig.* 381.) is antique and picturesque; but Catanzaro is the largest town in Calabria, and possesses some manufacturing industry.

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Squillace.

Sicily, the finest and most beautiful island in Europe, forms a valuable appanage to the kingdom of Naples. From the south-western extremity of Italy, this island extends westward in an irregular triangle, about 180 miles long and 150 broad. Immediately beyond the narrow strait which separates it from the continent, the surface begins to rise into the lofty heights of Etna, a mountain higher than any of the Apennines, and which strikes admiration and terror by the streams of volcanic fire which issue from it. Its branches overspread nearly the whole island, but on the northern and southern coasts they descend into gentle and cultivated hills. From these elevated regions descend numerous and rapid streams, which profusely water every part of the territory. Sicily possesses thus all the beauties and benefits of a warm climate, without even the partial aridity to which it is exposed. Its soil yields abundantly all the products of the finest temperate and even tropical climates. Its most uncultivated spots are covered with groves of fruit trees, and decked with beautiful flowers, such as elsewhere are carefully reared in gardens.

In its historical character, Sicily possessed anciently the highest distinction; and perhaps no country in the world has suffered a greater reverse. Greece early established here the most flourishing of her colonies; Syracuse and Agrigentum vied in power, learning, and wealth, with the mother country. Even when no longer able to maintain her own independence, she became the brightest prize for which Carthaginian and Roman contended. Reduced finally under the Roman empire, Sicily became one of its most valuable provinces, and the granary of the capital. In the early part of the middle ages, the Saracens founded here a flourishing state. After the establishment, however, of the Norman adventurers in the south of Italy, Roger, brother to Robert Guiscard, by a series of gallant exploits, drove out that powerful people. Sicily was then united with Naples, to which it has generally continued attached, though held occasionally by Spain and Savoy. It was also separated for a considerable time, when the French became masters of Naples, while the old family were maintained in Sicily by British protection; but on the fall of Murat, in 1815, the Two Sicilies became again one kingdom.

Sicily at present, notwithstanding its fertility and varied natural advantages, has sunk into a state of extreme poverty and degradation. The supineness and tyranny of the government, and the exorbitant privileges of the grandees, have reduced the body of the people to a state of the utmost penury. The varied and often rugged surface of the country intersected by numerous torrents, would require considerable efforts to form communication by roads; but this has been entirely neglected, and a line of twenty miles into the interior from Palermo is the only route practicable for carriages. In Agrigentum, once the mart of all the commodities of the Mediterranean, M. Kephalides could not procure a pair of gloves; and in Modica, a town of 11,000 people, a bit of soap was not to be obtained. Sicily, however, produces some wines that are esteemed; her raw silk is also fine, and with olive-oil, fruits, and salt, affords some materials for exportation. In return, she receives manufactured goods in great variety, though small quantity, their consumption being much limited by the poverty which pervades the great body of the people.

Sicily is divided into the following intendancies:—

	Population.	Principal Towns.
Palermo	409,000	Palermo, 168,000.
Trapani	147,000	Trapani, 24,000; Marsala, 21,000
Girgenti	291,000	Girgenti, 15,000.
Caltanisetta	156,000	Caltanisetta, 17,000.
Syracuse	194,500	Syracuse, 15,000.
Catania	292,500	Catania, 45,000.
Messina	240,000	Messina, 40,000.

Palermo, though it can boast neither monuments of antiquity nor classic modern edifices, such as adorn the cities of Italy, is yet a spacious and handsome city. It is traversed by broad streets crossing each other, and producing at their point of junction a striking effect. Many of the quarters, however, are ugly and dirty. The cathedral is a large ancient edifice, with some striking features; but the different styles of architecture are injudiciously blended. The palace of the viceroy is a splendid building, but not in good taste; its most interesting object is the ancient chapel of king Roger. Some of the country-seats in the vicinity command delightful views. The favourite resort of the Palermitans is a public garden called the Flora, which is not well arranged, but is rich in flowers and fruit.

Messina (*fig.* 382.) though smaller, is almost equal in importance, since from it is carried on almost the whole commerce of Sicily. Its wines, silk, fruits, and other articles produced for exportation, are mostly shipped at Messina. It has also a considerable silk manufactory. The city is beautifully situated on a bay, formed by the opposite coasts of Sicily and Calabria, and enclosed by lofty hills on each side. A century ago, Messina was much greater, and more flourishing; but it has passed since through calamities almost unparalleled. In 1743, the plague swept off half its population; and in 1783, the great earthquake, which was desolating Calabria, crossed the strait, and in a few minutes converted Messina into a heap of ruins. Most of the inhabitants effected their escape; but the finest streets were overthrown; precious commodities, libraries, works of art, were destroyed in vast numbers. From this fatal blow Messina has only imperfectly recovered.

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Port of Messina.

Southward from Messina, the coast begins to display the remains of great ancient cities, which were built chiefly on the eastern and southern coasts. Taormina, the ancient Tauromenum, now a small place, contains, among other ruins, a theatre, considered one of the most perfect monuments of antiquity, and in a most commanding site, between the mountains and the sea. Catania (*fig.* 383.), at the foot of Etna, is the finest city in the island. It is filled with Greek, Saracenic, and modern structures, all handsome. Yet it has passed through fearful vicissitudes. Overwhelmed by the volcano of 1669, almost destroyed by the earthquake of 1693, it has risen from these disasters with undiminished beauty.

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Catania.

Proceeding southward along the coast of the Val de Noto, we reach Siragusa (Syracuse). This ancient capital, so celebrated for power, learning, and splendour, presents now a striking example of the changeful character of human things. Of its vast ruins only some imperfect fragments can with difficulty be traced, scattered amid vineyards, orchards, and cornfields. The present town, which contains nothing remarkable, occupies only a very small portion of the ancient site. Near the south-eastern cape of Passaro are Noto and Modica, two large towns, one well built, the other very indifferently.

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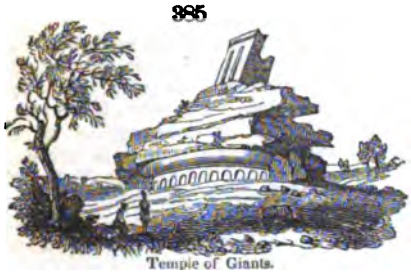
Environs of Girgenti.

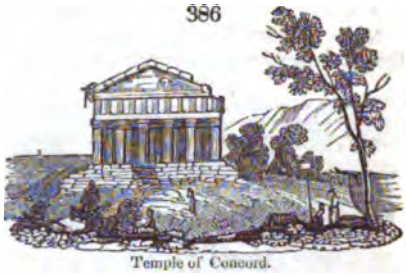
On the southern coast, Girgenti (*fig.* 384.), now a large poor village, presents monuments worthy of the ancient Agrigentum, when it was the greatest city of Sicily, and fit to contend with Carthage. The temple of Jupiter Olympus (*fig.* 385.), an immense structure, 368 feet long by 188 broad, is almost quite in ruins. It has been called the Temple of Giants, from huge forms of this description that are lying either entire or in fragments. The Temple of Concord (*fig.* 386.), with its thirty-four columns, is considered one of the most perfect specimens extant of the Doric order.

385



Temple of Giants.

386



Temple of Concord.

Farther to the east at Selinunti, the ruins of Selinus present a scene still more striking and awful. Here may be distinctly traced three noble temples, of which the materials still remain, but only a few solitary columns are standing; all the rest lie on the ground, in huge and shapeless blocks, forming the most stupendous mass of ruin to be found in Europe. It is generally supposed that an earthquake has been the cause of this extraordinary destruction, — that, as Mr. Swinburne expresses himself, nature has been chiefly concerned in this triumph over the pride of art (*fig.* 387.).

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Ruins of Selinus.

Trapani, the ancient Drepanum, poetically distinguished as the place where Anchises died, and where Æneas celebrated his obsequies, is still a considerable town, near the western promontory of Sicily, the ancient Lilybæum. It is well fortified, and has a good harbour, where there is a considerable trade in the export of salt made in its vicinity, and of barilla. It carries on briskly the fisheries of tunny and of coral, which last is obtained both from the coast of the island and that of Africa. Not far from Trapani is Segeste; a simple, grand, and almost entire edifice, standing on a solitary hill (*fig.* 388.). Marsala, almost on the very site of Lilybæum, is a considerable town, exporting wine that is much esteemed. Near it the quarries of Mazzara appear to have furnished the stone of which the edifices in this part of Sicily have been constructed.

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Temple of Segeste.

The ascent of Etna is a general object with Sicilian travellers. In proceeding from Catania, they pass through three successive zones: first that of rich cultivated fields, then that of plants and aromatic shrubs; and, lastly, the region of scoriæ, ashes, and perpetual snow. On reaching the summit (*fig.* 389.), they view the crater filled with vast volumes of smoke, and obtain a fine panoramic view over all Sicily and the adjoining shores of Italy.

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Summit of Etna.

The Lipari Islands, twelve in number and situated from twelve to thirty-five miles northward from the Sicilian coast, are entirely volcanic, and appear to have been thrown up from the sea by the action of fire. Lipari itself contains a hill of white pumice, which forms an article of trade, and its crater displays various specimens of beautifully crystallised sulphur. Stromboli has a volcano, remarkable for being in perpetual activity. Every day, at short intervals, the eruptions issue forth like great discharges of artillery, and the sides of the mountain are covered with the red-hot stones that are ejected, and rush down into the sea. The inhabitants of these islands are a bold, active, and industrious race. The activity of submarine fires has been manifested on another side of Sicily, by the recent rise of Graham's Island; only, indeed, a volcanic rock, which has again sunk under water.

SUBSECT. II.—*Island of Malta.*

Malta (*fig.* 390.), an islet in the Mediterranean, about fifty-four miles to the south of Sicily, though imperfectly connected with Italy, belongs more to it than to any other country. It obtained little notice in antiquity; and, when St. Paul was shipwrecked there, is described as inhabited by a barbarous people. Its importance began in the sixteenth century, when it was ceded by Charles V. to the Knights of St. John of Jerusalem, as a compensation for the loss of Rhodes. Its fortifications were then greatly strengthened, and it was considered the last maritime bulwark against the Turks. In 1565, Solyman sent against Malta a most formidable fleet and army; and the siege which ensued is one of the most celebrated in history. After prodigious efforts, the Ottoman armament was completely repulsed, and the knights were left in the unmolested possession of the island, till 1798. Napoleon then, with the expedition destined for Egypt, suddenly appeared before La Valetta, and took possession of it without resistance. Britain afterwards reduced it by blockade; and, notwithstanding a stipulation in the treaty of Amiens, has since retained possession of it. In 1825, the native population of Malta amounted to 99,600; the garrison and strangers to 3200. On the neighbouring smaller island of Gozo there were 16,800. The people are industrious; and, notwithstanding the barrenness of their soil, raise grain, cotton, and excellent fruits, particularly oranges.

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Malta.

La Valetta, the capital and port of Malta, being situated on a narrow tongue of land, with a noble harbour on each side, forms an admirable naval station, deriving great importance from its position in the heart of the Mediterranean. It serves also, especially during war, as a commercial depôt, whence goods may be introduced into Italy and the Levant.

CHAPTER XII.

SWITZERLAND.

SWITZERLAND forms a mountainous territory in the centre of Europe, occupying the west of the great range of the Alps, which divides France and Germany from Italy. It is remarkable for the grandeur of its natural features and scenery, and for the freedom of its political institutions.

SECT. I.—*General Outline and Aspect.*

Switzerland is bounded by the great kingdoms of France, Germany, and Italy, whose frontiers enclose it on all sides; France on the west; Germany, and more particularly Swabia and the Tyrol, on the north and east; the Italian states, Milan, Piedmont, and Savoy, on the south. In general, Switzerland terminates where its mighty mountain heights slope down to the vast plains which extend over the surrounding regions; but on the side of the Tyrol on the east, and of Savoy on the south-west, the line is drawn across the crest of the Alps themselves, which stretch away with almost undiminished grandeur towards opposite seas. Its position is nearly between 46° and 48° north latitude; and 6° and 10° 30′ east longitude. It may be about 200 miles in length, and 140 in breadth, and comprises an area of 15,000 square miles.

The surface of Switzerland, bounded and traversed as it is by the highest ranges in Europe, consists almost wholly of mountains and lakes. The Alpine chains, however, do not swell, like those of America and Asia into mighty and continuous table-lands; they are separated by deep valleys or narrow plains, which form the basin of large rivers, or the bed of extensive lakes: hence arises a singular variety of climate and aspect; for while the valleys beneath are scorched by the intensest rays of the sun, perpetual winter reigns in the heights above, and the vegetation of the arctic circle is found in the snows of the Alpine summits.

Of the mountains of Switzerland, Mont Blanc stands at the head; being the loftiest in Europe, and supposed, before the late observations on those of Asia, to surpass all the heights of the old continent.

Mont Blanc is within the limits of Savoy; but forming, as it were, the key of the great Alpine chain, and all its approaches being on the side of Switzerland, it has always been regarded by Europeans as decidedly Swiss. The scenery to the west of Mont Blanc, in the approach from Geneva, presents the most striking display that is to be found in Europe, of whatever is wild, wonderful, and sublime in Alpine scenery. The Valley of Chamouni, the Glacier of Bossons, and the *Mer de Glace*, present, in particular, scenes of the most aston-

ishing grandeur. The upper regions of the mountain were long considered as inaccessible to the foot of mortals; but Saussure first, and several English and American travellers since, have, by fearless enterprise and adventure, succeeded in penetrating across the steeps covered with ice and snow, the perilous chasms, the narrow and slippery paths along precipices, and all the other dangers which beset this daring ascent. North-east from Mont Blanc extends the line of those amazing Alps which form the Italian boundary: the Great St. Bernard; Monte Rosa, which ranks second in height to Mont Blanc; the Simplon, across which such an astonishing military road has been excavated; Mount St. Gothard, the route over which, however rugged and dreary, was, previous to the formation of that of the Simplon, the most frequented of any from Switzerland into Italy. Beneath this range extends the deep valley of the Rhone, from the northern side of which again shoots up another series of peaks, or horns, as they are here termed, which though they nowhere attain the unrivalled height of Mont Blanc, present a more continuous elevation, and a more imposing mass than even those which border on Italy. Among these peaks, the most memorable are the Shreckhorn or Peak of Terror, the Wetterhorn, or Peak of Storms, the Gletscherhorn or Glacier Peak: and, peering above all, the Finster-Aar-horn, which reaches a height of 14,111 feet. Down the prodigious steeps which these present to the plain of Berne, descend the glaciers, or great fields and plains of ice, which, sliding down from the upper region of the mountains, reach the lower valleys, where they remain unmelted, and even accumulate in successive seasons, and are often seen bordering on the cornfields and vineyards. The whole of southern Switzerland is covered by these great ranges; but the northern part presents a somewhat different aspect. In the east, the territory of the Four Cantons is diversified, indeed, by several very high and picturesque single peaks, as Mount Righi and Mount Pilate; but the general ranges which enclose its lake vary from 2000 to 4000 feet. The north-west district, consisting of the canton of Friburg, with great part of those of Berne and Soleure, composes an extensive plain, the only one which exists in Switzerland, and from which the mountains are only seen in white and distant lines; but the whole frontier of this side towards France is barred by the steep though not very lofty ridge of the Jura.

The great rivers which water the surrounding regions either take their rise in Switzerland, or are swelled by tributaries from that country. The Rhine and the Rhone have both a long course, and have risen to streams of the first magnitude, before they pass its frontier. These, with the Aar, the Reuss, and the Ticino, rise from the vicinity of each other, where the two great chains nearly unite, and where the Schreckhorn, the Finster-Aar-horn, and St. Gothard, tower above the wild valleys of Urseren and the Upper Valais.

The Rhone flows through the deep valley between the Italian chain and that of the central peaks, and is swelled at every step by numberless torrents dashing down their sides. At length, emerging from this mountain region, it diffuses the huge mass of waters thus collected into the ample expanse of the Lake of Geneva. At the opposite extremity, near the city of that name, it bursts out, and rolling towards the frontier, becomes finally a French river. The Rhine has its first course along the most obscure Grison and Tyrolese frontiers, but on touching the German plain it spreads into the wide and beautiful Lake of Constance. Thence emerging, it flows nearly due west, forming the almost continuous northern boundary of Switzerland on the side of Germany; till at Basle, coming into contact with France, it strikes suddenly to the north, and bids a final adieu to its parent country. The Aar, the only large river, exclusively Swiss, descends from the Finster-Aar-horn, rolls along the foot of the glaciers, collecting all their waters, which it distributes among the lakes of Thun and Brientz; after which it passes by a circuitous course along the level tracts of Switzerland, till it joins the Rhine on the German frontier. Almost immediately before this junction, it has received the Reuss, (*fig.* 391.), from a source in the heart of the wildest scenery of St. Gothard, and which in its northern course has formed the great Lake of the Forest Cantons. The Limmat, also, after forming the Lake of Zurich, enters nearly at the same point. To the Danube Switzerland also contributes the Inn, through the valley of Engadine, while it gives to the Po the Adda from the Valteline, and the Ticino from the heights of St. Gothard.

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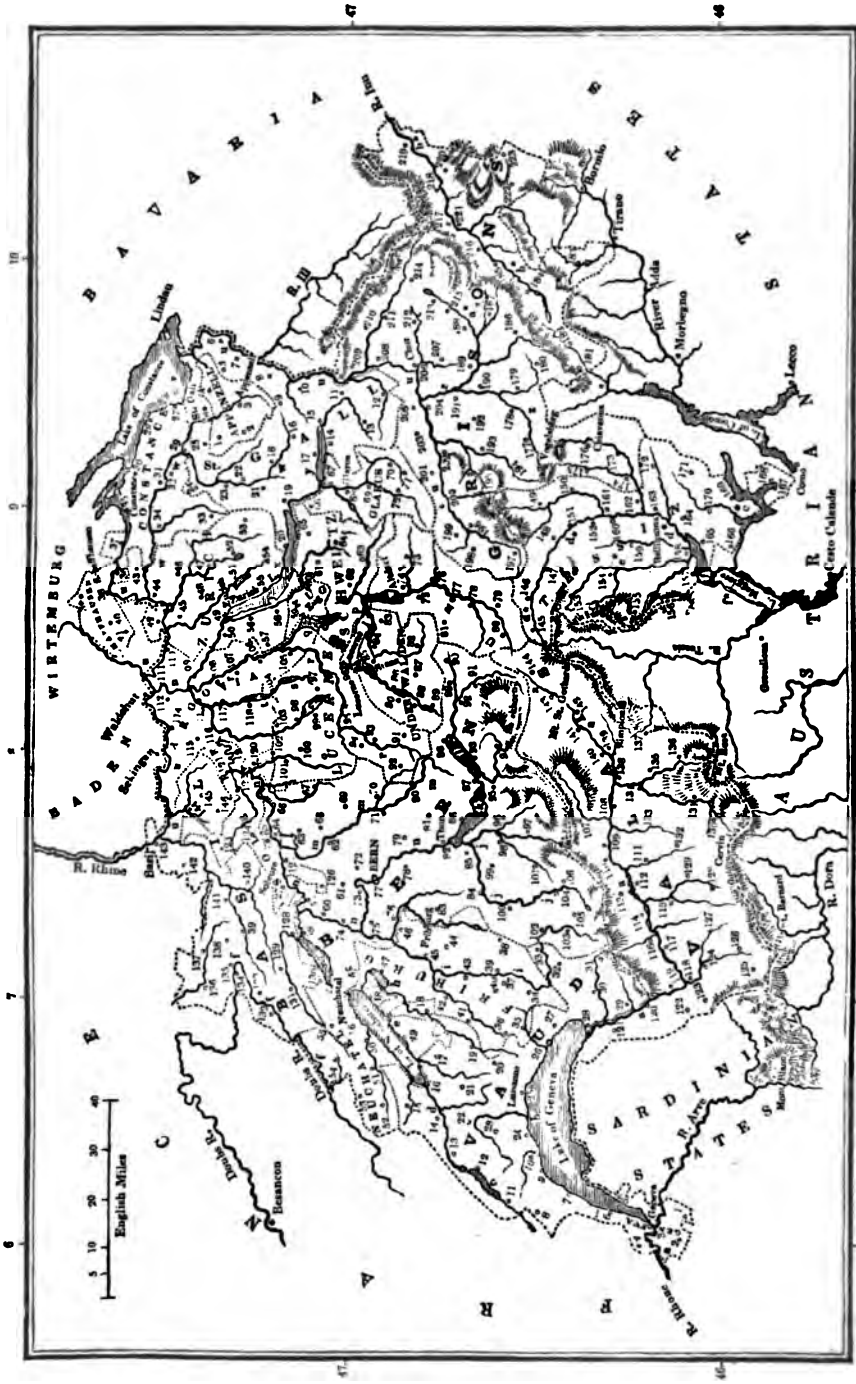
Source of the Reuss

Lakes form a conspicuous feature in the physical structure and scenery of Switzerland. Its rivers, after rolling for a considerable space through mighty mountain valleys, accumulate a mass of waters which, when they reach the plains, no longer find a channel capable of containing them, but spread into wide watery expanses. The lakes of Switzerland are large, though none of them have that vast extent, which


BAVARIA
WIRTEMBURG
BADEN
ALSATIA
SAVOY
SARDINIA
ITALY
LOMBARDY
TYROL
Lindau
Lake of Constance
R. Rhine
Basil
Schaffhausen
Zurich
Berne
Lucerne
Geneva
Lake of Geneva
Lausanne
Neufchatel
Soleure
Fribourg
Valais
Chur
Coire
Bellinzona
Lugano
Como
Lake of Como
Lake Lugano
Lake Maggiore
Milan
Pavia
Novara
Turin
Susa
Mont Cenis
Mont Blanc
Grenoble
Chambery
Annecy
Besançon
Dijon
Belfort
Porrentruy
Delemont
Aarau
Baden
Frauenfeld
Constance
Coblentz
Tyrol
Trento
River Adda
Lake Lecco
Lake Como
Cape Colonna
Genoa
Mont Rosa
Mont Cervin
Mont Velan
Mont Pelvoux
Mont Viso
Mont Genevre
Mont Iseran
Mont Cenis
Mont Blanc
Mont Buet
Mont Dolent
Mont Combin
Mont Rose

could entitle them to be classed as inland seas. The smiling valleys and cultivated hills which form their immediate border, with the mighty mountains which tower behind in successive ranges, till they terminate in icy pinnacles rising above the clouds, produce a union of the sublime and beautiful, which no other part of Europe, or perhaps of the world, can rival.

The Lake of Geneva, or Leman Lake, is the most extensive, being about fifty miles in length, and twelve in its greatest breadth. The varied beauties of its northern bank, the opposite heights of Meillerie, and Mont Blanc rising behind in the distance, render it perhaps the most beautiful lake in the world. The Lake of Lucerne, or of the Four Forest Cantons, has, from its winding form, and the great variety of its scenery, sometimes been considered as superior. The Lake of Zurich does not offer the same sublime beauties; but the gentle elevations by which it is diversified form many scenes of extreme beauty. That of Constance has none of the mountain grandeur of interior Switzerland, but its extended banks present many pleasing cultivated and pastoral scenes. The southern lakes, Maggiore, Como, Lugano, which half belong to Italy, exhibit many magical scenes, combining the gay splendour of the Italian plain with the grandeur of its mountain boundary; yet they do not possess that deep stillness and solemnity which give a peculiar charm to the lakes that are entirely enclosed within the Alpine barrier.

References to the Map of Switzerland.

NORTH PART.

Canton of Appenzell.

1. Herisau
2. Umaechen
3. Appenzell
4. Trogen.

Canton of St. Gall.

5. Altstetten
6. Dieboldsau
7. Kobelwies
8. Sulez
9. Wildenhaus
10. Werdenberg
11. Sargans
12. Vattis
13. Weisstannen
14. Mols
15. Wallenstadt
16. Starkenbach
17. Quinton
18. Krumenau
19. Uznach
20. Rapperschwyl
21. Bildhaus
22. Lichtensteg
23. Dietfurt
24. Wyl
25. Gossau
26. St. Gall.

Canton of Constance or *Thurgau.*

27. Arbon
28. Utwyl
29. Bischofszell
30. Constance
31. Weinfelden
32. Schonholzerschwyl
33. Dussiingen
34. Frauenfeld
35. Schreckhorn
36. Diessenhofen.

Canton of Schaffhausen.

37. Stein
38. Schaffhausen
39. Bargen
40. Neunkirch
41. Osterfingen.

Canton of Zurich.

42. Eglisau
43. Trallikon
44. Flach
45. Eglisch
46. Winterthur
47. Fehr Altorf
48. Bassersdorf
49. Zurich
50. Altstetten
51. Greiffen
52. Pfaffikon
53. Fischenthal
54. Grusingen
55. Meylen
56. Adlischwyl
57. Ottenbach
58. Husen

Canton of Zug.

59. Zog
60. Egeri

Canton of Schweitz.

61. Einsiedeln
62. Schweitz
63. Muotta
64. Rutli
65. Waggithal.

Canton of Glarus.

66. Bad
67. Mollis
68. Glarus
69. Schwanden
70. Elm
71. Wichlen
72. Matt.

Canton of Uri.

73. Unterschachen
74. Altorf
75. Ersifeld
76. Amstag
77. Gurtnellen
78. Goschenen
79. Andermatt
80. Realp
81. Fernigen.

Canton of Unterwalden.

82. Holz
83. Ematten
84. Buoche
85. Stanz
86. Sarnen
87. Melk
88. Giswyl
89. Lungernu
90. Oberwyl.

Canton of Lucerne.

91. Glasshutte
92. Meischacben
93. Schupfen
94. Romos
95. Malters
96. Lucerne
97. Sempach
98. Sursee
99. Nothwyl
100. Willisau
101. Antifofen
102. Reiden
103. Triengen
104. Hallwyler.

Canton of Argovia or *Aargau.*

105. Sins
106. Wierd
107. Bremgarten
108. Mellingen
109. Baden
110. Kaiserstuhl
111. Klingnau
112. Mandak
113. Brugg
114. Lauffenburg
115. Hersnach
116. Aarau
117. Lenzburg
118. Lutwyl
119. Aarburg
120. Zofingen.

Canton of Soleure.

121. Olten
122. Hagendorf
123. Beinweil
124. Lauberadorff
125. Soleure
126. Schnottwyl
127. Selzach.

Canton of Berne.

128. Bienne
129. Colebert
130. Neustatt
131. St. Imier
132. Gomoy
133. Vellier
134. Cerniere
135. St. Ursanne
136. Porentrui
137. Miecourre
138. Montavon
139. Busecour
140. Bepraon
141. Delemont
142. Hoffstettin.

Canton of Basle.

143. Basle
144. Liechstall
145. Teningen
146. Wallenburg.

SOUTH PART.

Canton of Geneva.

1. Arcamp
2. S. Julien
3. Geneva
4. Meirin
5. Corsi
6. Versoy.

Canton of Vaud.

7. Nyon
8. St. Sergue
9. Rolle
10. Aubonne
11. Brassu
12. Abbaye
13. Vallorbe
14. Orbe
15. Vugelle
16. Yverdun
17. Molondin
18. Peterlingen
19. Moudon
20. Carrouge
21. Essertine
22. La Surra
23. Grancon
24. Morges
25. Lausanne
26. Vevay
27. Montreux
28. Reville
29. Bex
30. Sepey
31. Vers l'Eglise
32. Etivaz
33. Rougemont.

Canton of Friburg.

34. Albeuve
35. Chatel S. Denis
36. St. Martin
37. Greyerz
38. Tour la Jogne
39. Creout
40. Bulle
41. Romont
42. Autigny
43. Pont
44. Giffers
45. Friburg
46. Wunewyl
47. Morat.

Canton of Neufchatel.

48. Cudrefin
49. Estavayer
50. Boudry
51. Travers
52. St. Sulpice
53. Brevine
54. Le Loch
55. Les Loges
56. Neufchatel.

Canton of Berne.

57. Aneis
58. Nydau
59. Buren
60. Buetigen
61. Buchsee
62. Burgdorf
63. Seeberg
64. Wangen
65. Wutlispach
66. Arwangen
67. Hutwyl
68. Wynigen
69. Sumeswald
70. Langau
71. Signau
72. Bolligen
73. Bremgarten
74. Arberg
75. Cappelen
76. Riederen
77. Berne
78. Gerzen
79. Diesbach
80. Tschangnau
81. Schwarzenegg
82. Thun
83. Geggisberg
84. Oberwyl
85. Reutigen
86. Ralligen
87. Utterseen
88. Brienz
89. Muhlithal
90. Gadmen
91. Boder
92. Hasli
93. Iseltwald
94. Grindelwald
95. Wilderschwyl
96. Kienthal
97. Kandersteg
98. Frutigen
99. Diemtigen
100. Weissenbach
101. Schwanden
102. Gestade
103. Im Grung
104. Ander Lenk
105. Lauenen
106. Oberreid.

Canton of Valais.

107. Ferden
108. Turtia
109. Lenk
110. Salgesch
111. Nisoye
112. Gradets
113. Lenz
114. Sion
115. Heremence
116. Ardon
117. Riddes
118. Martinach
119. Cologne
120. St. Maurice
121. Murat
122. Finio
123. Trient
124. St. Branchier
125. Ferret
126. St. Pierre
127. Morgne
128. Barthelemi
129. Evolena
130. Zmutt
131. Matt
132. Ayer
133. Gruben
134. Stalden
135. Hollerbuel
136. Almengal
137. Simplon
138. Vispach
139. Brigg
140. Naters
141. Lex
142. Aernen
143. Biel
144. Im Loch.

Canton of Tesino.

145. Ronco
146. Airolo
147. Ambri
148. Faido
149. Olivone
150. Lotigna
151. Chiggiogna
152. Lavorgo
153. Fusio
154. Covio
155. Comologno
156. Borgnone
157. Brissago
158. Locarno
159. Brione
160. Tragna
161. Biasca
162. Castiglione
163. Bellinzona
164. Cadenazzo
165. St. Nazaro
166. Sessa
167. Riva
168. Capo Lago
169. Lugano
170. Tavarne
171. Val Colla
172. St. Antonio.

Canton of Grisons

173. Cama
174. Roveredo
175. St. Domenica
176. St. Giacomo
177. Hinterheim
178. Savers
179. Farrera
180. Bergala
181. Castasegna
182. Vicosoprano
183. Puschlau
184. Samaden
185. Scanf
186. Stalla Bivia
187. Bergun
188. Wiesen
189. Lenz
190. Zillis
191. Tusis
192. Plaz
193. St. Martin
194. Zavreila
195. Burasch
196. Morpemedels
197. S. Maria
198. Sedrun
199. Disentis
200. Somvix
201. Ruvis
202. Ilanz
203. Segens
204. Bonadus
205. Tamins
206. Coire
207. Parpan
208. Zizers
209. Mayenfeld
210. Schiers
211. Fideris
212. Peist
213. Dorrfli
214. Unter
215. Glarus
216. Cinuseel
217. Sues
218. Ardetz
219. Strada
220. Tarasp
221. Zernetz
222. Cierf
223. Munster.

Rivers and Lakes.

a Rhone, R.
b Lake of Geneva
c Lake Joux
d Orbe, R.
e Lake of Neufchatel
f Doubs, R.
g Lake Bienne
h Lake Morat
i Saone, R.
j Simmen
k Lake of Thun
l Lake of Brientz
m Emmen, R.
n Aar, R.
o Lake Sempach
p Lake Lucerne
q Lake Zug
r Reuss, R.
s Lake Baldegger
t Lake Hallwyler
u Rhine, R.
v Lake of Constance
w Thun, R.
x Lake of Zurich
y Lake Wallenstadt
z Upper Rhine, R.
a* Albula, R.
b* Inn, R.
c* Lake Lugano
d* Ticino, R.
e* Maggia, R.
f* Lake Maggiore.

SECT. II.—*Natural Geography.*

SUBSECT. 1.—*Geology.*

The geognosy of this magnificent country, although it has engaged the attention of geologists from the time of Saussure up to the present period, is far from being well understood. We cannot here enter into the discussions connected with the age, characters, and distributions of its formations, which now occupy the talents of so many distinguished observers; but refer our readers to the writings of Saussure, Ebel, Escher, Von Buch, Necker, Boué, Kefferstein, Brongniart, Murchison, Buckland, Sedgwick, Brochant, Hugi, Studer, and others. Switzerland is principally composed of Neptunian deposits; the Plutonian rocks occupying a comparatively small portion of the country.

I. *Primitive and transition rocks.* (1.) *Neptunian.* These form the more central part of the country, and consist of the following rocks:—1. *Gneiss.* 2. *Mica slate.* Where the mica disappears, *quartz rock* is formed, which sometimes occurs in beds of considerable magnitude. When the quartz of the mica slate disappears, there is formed a slaty rock entirely composed of minute scales of mica, forming the *primitive clay slate* of authors. 3. *Talc slate.* This rock, which is a slaty compound of quartz and scales of talc, was long confounded with mica slate. Sometimes the quartz disappears, when a talcy rock with slaty structure is formed, known under the name *slaty talc;* which passes into the rock named potstone, and also into another well-known magnesian or talcy rock, named chlorite slate.

But by far the most interesting of the rocks of this deposit is that named protogine, which is a slaty or granular compound of quartz, talc, and felspar. The granular varieties have been described as granite; the slaty as gneiss, or under the name *veined granite.* Nearly the whole of Mont Blanc, as far as visible to the eye, is composed of protogine. 4. *Limestone.* Beds of this rock occur in the preceding rock, and especially in the talc slate. The limestones in the latter rock are frequently dolomites or magnesian limestones, and afford marbles valued by the statuary. Gypsum and Karstenite also occur in the talc slate districts. 5. *Hornblende rock.* Of this rock, the principal varieties, namely, hornblende rock properly so called, and also hornblende slate, occur in the gneiss, mica slate, and talc slate mountains. (2.) *Plutonian rocks.* True Plutonian, or igneous primitive and transition rocks, are not very abundant anywhere in Switzerland. The following are particularly noticed by authors: granite, syenite, and porphyry; which latter contains quartz, and seems to be a mere modification of granite. These rocks appear to have given the Neptunian strata not only their inclined position, but also to have fractured, contorted, and variously altered their individual characters.

II. *Secondary deposits.* (1.) *Neptunian.* These are disposed in the following order: the lowest or oldest is, 1. *Red marl, sandstone, gypsum,* &c., containing occasionally large subordinate masses of magnesian limestone. This deposit some consider to be equivalent to the red marl and keuper. 2. *Inferior or older Alpine limestone.* This, from its organic remains, is considered as representing in Switzerland the lias of English geologists. 3. *Alpine limestone,* with subordinate saliferous beds. This deposit is considered as a portion of the oolite limestone, not far from the Oxford and Kimmeridge clay. 4. *Newer Alpine limestone.* Under this head are included those portions of the oolite series higher in the order than that just mentioned, and which therefore rests upon it. 5. *Green sand and chalk,* Resting upon the newer Alpine limestone there are beds of green sand, and of a rock which contains fossils identical with those found in chalk: hence it is by geologists considered as belonging to that formation. (2.) *Plutonian rocks.* The principal Plutonian rock is a porphyry without quartz, named melaphire; also augite porphyry and black porphyry. It is observed rising among the secondary deposits, and is viewed as the agent to which the strata owe their highly inclined position, and the mountain ranges their present situation. Serpentine and dolerite, also igneous rocks, occur among the secondary strata.

III. *Tertiary deposits.* In the great valley on the north side of the Alps, which separates them from the Jura chain, there is a vast deposit of tertiary rocks, of which one of the most prominent kinds is the conglomerate named molasse.

IV. *Alluvial deposits.* The older diluvium, which contains remains of extinct quadrupeds, as the elephant, &c., is abundant. The numerous rolled blocks of rock scattered over the country, far distant from their native places, and which appear to owe their distribution to the upraising of the mountains, are well known to travellers and geologists.

Subject. 2.—*Botany.*

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Cactus Opuntia.

This may well be called a land of mountains; consequently, its vegetation partakes very much of the alpine or arctic character; but as a great portion of its valleys resembles the climate of Italy, on the one hand, (even producing, in the warmer valleys, and in a state that may be reckoned completely naturalized, the Cactus Opuntia (*fig.* 393.), or Small Indian or Prickly Fig,) and the climate of France and Germany, on the other; so does the nature of its vegetation vary in consequence, and the flora is extremely rich and beautiful. To afford any thing like a correct idea of this, is far from our object; we must content ourselves, in this place, with giving an account of the cultivated and most striking of the spontaneous vegetation, according to its elevation above the level of the sea; and this we are aided in doing, by an interesting statement, which appeared in an early number of Black and Young's *Foreign Review*, "upon the state of cultivated and spontaneous vegetation in the higher parts of Switzerland." The elevation above the level of the sea is given in French feet:—

Place.	Elevation.	
Embs	2200.	Buckwheat (*fig.* 394.), sown after the Rye is reaped, ripens; at Ilanz it does not come to maturity; and a little higher the forty-days Maize (*quarantino*), a variety of the Zea Mays, is very precarious: at the same height, in the valley of the Upper Rhine, the vegetation of this plant ceases altogether.
Costasegna	2300.	At this place, near the borders of Lombardy, is the limit of the cultivation of the White Mulberry; at a greater elevation, neither this tree nor silkworms are seen.
Travanessa between Ilanz and Truns Ilanz.		The last Walnut trees (*fig.* 395.) are seen: it is remarked that this tree thrives better in valleys with an east exposure, than in those with a north, even though elevation and other circumstances are the same.
Truns	2400.	

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Buckwheat.

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Walnut.

Santa Maria	2750.	The growth of Chestnut trees ceases near this place.
Porta	2810.	The limit between the vegetation of the northern and southern districts is generally fixed here: a little higher, towards Bergonovo, a few straggling and stunted Walnut trees are seen, while at the base of the rock whereon the ancient and lofty town of Porta is built, Walnut and Chestnut trees flourish in luxuriant fruitfulness; and at a short distance from Porta, the Fig adorns and enriches the gardens, and the flanks of the mountains are clothed with the Cytisus and Broom.
Churwalden	3800.	Here Flax, Hemp, and Barley are grown with success; Winter-Rye is not so certain a crop. Cherries ripen, but fruit with pips (*Apples, Pears*, &c.) is not grown At Parpau, a village 600 or 700 feet

Place Elevation.

higher than Churwalden, the inhabitants do not cultivate any species of grain: many kinds of trees, as the Italian Poplar (*fig.* 396.), Ash, and Wild Cherry, which grow at Churwalden, will not vegetate at Parpan; the only cultivated herb at this latter place is a variety of the Rumex alpinus, or Sorrel.

Vilo - - - - 3800. Different kinds of Firs compose the entire and exclusive vegetation. A little lower, Larches, intermixed with some of the Pinus Cembra (*fig.* 397.), or Siberian Pine, commonly called Alvier, are seen: all

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Italian Poplar.

Siberian Pine.

the more common species of grain are sown, and Potatoes generally diffused. Maize, which succeeds perfectly a little lower, ripens here also in ordinary seasons. In another part, however, our author seems to fix an elevation of 2000 or 2500 feet as the boundary of the productive cultivation of Maize. He also remarks, that a height of 3000 feet, with a southern exposure, will allow the cultivation of Buckwheat (*blé sarrasin*), even after the Winter-Rye has been reaped. It will be curious, and may be instructive, to compare the limit, in point of elevation, that bounds the profitable growth of maize in this part of Switzerland, with the limit, in respect to latitude, that arrests its profitable culture in France. According to A. Young, the line of separation between maize and no maize is first seen on the western side of the kingdom, in going from the Angoumois, and entering Poitou at Vérac, near Ruffec: in crossing Lorraine, it is first met with between Nancy and Luneville: in passing from Alsace to Auvergne, the limit is at Dijon. Hence it appears that the boundary of the maize culture is two degrees and a half farther north on the eastern than on the western side of France; the northern boundary on the west side being about 46½ degrees, and on the east side about 49 degrees. From this fact, connected with the two other facts, that the northern limits of the vine and olive culture in France are parallel to the northern limit of the maize culture, Mr. Young inferred that the eastern districts of France are 2½ degrees of latitude hotter (or, if not hotter, more friendly to vegetation) than the western.

Isola - - - 3900. Potatoes are fit to be taken up, and Barley to be reaped, here, a month earlier than in the Oberland, where the elevation is only 3400 feet,

Place.	Elevation.	
		but where there is a northern exposure. Flax and Hemp succeed here; and in the small sheltered enclosures the Sunflower expands in all its magnificence, while in the meadows the Maple and Ash exhibit every symptom of healthy and luxuriant vegetation. Our author justly remarks, that the ripening of the seeds of trees is a surer criterion of the comparative temperature of different situations and climates, than the maturing of grain or cultivated vegetables; since the perfection of these must often depend on fortuitous circumstances; as on the skill, labour, manure, &c. bestowed on them.
Wiesen - -	4400.	Near this village, on the declivity of a mountain facing south, Rye sometimes arrives at maturity, provided it is sown immediately after harvest, and Hemp not unfrequently succeeds.
Zernetz - -	4400.	The inhabitants obtain a crop of Rye; but, in order to succeed, it must be sown in a particular manner; viz., in the spring, along with March Barley: after this is reaped, the rye is mown, and at the next harvest of the barley it also has reached maturity: the rye is occasionally sown with peas instead of barley. Potatoes were not tried till after the scarcity in 1817: they grow well: Hemp also thrives; but Flax, being more delicate and susceptible of cold, is not cultivated at Zernetz.
Casaccia - -	4600.	On the higher grounds in this neighbourhood, the Pinaster or Cluster Pine tree prevails, the Larch being seldom seen, though this and the Siberian pine constitute the chief part of the forests of the Higher Engadine. At a lower elevation, the Service tree flourishes; and lower still, near Casaccia, the Alder (*Betula Alnus viridis*) covers the side of the mountain. No description of Corn is grown. Our author observed a small patch of Potatoes, which seemed planted solely as an experiment, and did not appear as if they would ever come to perfection.
Selva - - - -	4900.	The stalk as well as seed of Flax attains perfection here. Hemp, also, has occasionally succeeded. Between 100 and 150 feet higher up, that is, at an elevation of more than 5000 feet, Barley ripens on the sides of the mountains exposed to the sun. Some Cherry trees grow at Selva, and occasionally ripen their fruit.
Valley of Au	5270.	In the inn garden were Carrots, Cauliflower, Radishes, a kind of Turnip with a carrot root, long, thin, and poor; and the White Cabbage; the last, however, not well hearted. Potatoes are not grown.
Samaden - -	5300.	Radishes succeed here, as well as Turnips. Potatoes do not. At 100 feet higher, towards Celerina, Barley and Oats ripen. This fact excites the author's surprise; but he does not account for it. He informs us that, in the upper district of Berne, neither one nor other of these grains will grow at a higher situation than 4000 feet; and that in a Bernese valley, with only 3400 feet of elevation, the Turnips sown in spring perish with cold; whereas the Navets d'hiver (a species of Rape?) do not suffer, and yield abundance of oil.
St. Maurice	5500.	In the kitchen-garden grow the Turnip-rooted Cabbage, Carrots, Radishes, Lettuces, and Cabbages, very indifferently hearted: the Pease were in flower.
Scarla - - -	5580.	Notwithstanding this great height, a considerable quantity of corn is cultivated: barley alone proves very successful; and often the premature frosts of August and September destroy it.
Campfer, between	5600 and 5700.	Barley and Potatoes sometimes come to perfection in this district. Our author regards this as the limit of their vegetation. Trefoil will not grow higher than at Lutz, 5300 feet; and in 1822, there was no barley harvest higher than Celerina.
Sertig - - -	5650.	Near the church of this place a few Raves were growing; but no Potatoes nor Grain. About 200 feet lower, in a sheltered situation, is a forest of Firs. Potatoes and barley often attain maturity here. In consequence of the northerly exposure of the ground near the church, Carrots will not grow, though they thrive in a loftier situation than where potatoes and barley usually ripen. At the same height, and with the same exposure, Melilot (a species of *Trefoil*) flourishes. As this plant is indigenous to Libya, and yet thrives in the cold climate of the Alps, it suggests the idea that it might be practicable to enrich the mountains of Switzerland with the native productions of warmer climes, especially among the Papilionaceous

Place.	Elevation.	
		tribes. The plant in question (*Libyan Trefoil* or *Melilot*) growing at the foot of the Glaciers of Scalitta, and the Apricot tree acclimated in the Grindenwald, an elevation of 3180 feet, would seem to justify these suggestions and hopes.
Maloya - - -	5730.	No Grain, Flax, or pot-herbs, will grow here.
Splugen - -	5830.	The elevation of the hospice on this mountain is equal to that of the hospice on the Grimsel in Oberland; but vegetation is here far more varied and luxuriant.
Tchugen - -	5900.	At this high elevation the only plant cultivated is the Rumex alpinus, a species of Sorrel much grown in these mountain districts, for fattening swine in winter. The roots are prepared by twisting them till the cellular tissue is detached: then they are put, with a small quantity of salt, into a trench, lined and covered with planks, over which stones are placed. About 300 feet lower, the Siberian Pine and Larch present a healthy and vigorous appearance; the seed of the former ripening early in October. This tree, the Pinus Cembra, or Siberian Pine, is one of the most useful in Switzerland, though its growth is so slow, that one of them, about 19 inches in diameter, presented, when cut down, 353 concentric circles. Its usual increase of height is a span in six years. The timber of this tree has a most agreeable perfume, and is much employed for domestic purposes, as well as for wainscoting rooms. When our author visited the château of Tarasp, he was struck, in almost every apartment, with the scent of this wood; and he remarks it as a singular and inexplicable circumstance, that it should have thus exhaled its fragrance for some centuries in undiminished strength, and without the wood itself having suffered any decrease of weight. This timber possesses the additional recommendation that its perfume is an effectual preservative against bugs or moths. The seeds of the Siberian Pine are esteemed a delicacy, and eaten in great quantities during the winter festivals: yet this use of them is considered pernicious to health, and the writer rather recommends applying them to the same purpose as in Siberia, where, according to Pallas, a valuable oil is extracted from them, which is eaten at table, and might be employed in manufacturing soap. This species of pine is unfortunately becoming very scarce, and its cultivation is therefore strongly recommended. In order to secure and expedite its growth, and thus remove the principal objection to its culture, it would be desirable that the seeds were deposited in a compost made of earth and the clippings and leaves of the pinaster or larch, or that this compost be laid round the roots of the young plants. The Larch is also a valuable tree to Switzerland; not only for the purpose of affording manure, but because of its durable timber. This lasts four times longer than common pine timber grown at an equal elevation. If, therefore, the larch be planted where the common pine now grows, it is evident that much of the forest ground might be gained, and applied to pasture. The foliage of the larch, Siberian pine, and several other trees, is carefully collected by the Swiss peasantry on the mountains, being put into large bags for winter fodder, and then hurled downwards into the valleys below. Near Seldun, the leaves of Nut and Elm are used in a particular manner: being gathered in their prime, they are dried, and ground to powder, and in this state given to swine, mixed with their customary drink in winter; and our author was assured that this diet fattened the animals as well as barleymeal; an assertion that sounds almost incredible to British ears. In the Oberland, the bark of the young Oak, peeled off in the spring, dried and ground, is found to be equally healthy and nourishing for all kinds of cattle. A knowledge of these facts may prove useful, as affording hints for the owners of property in the mountainous districts of Scotland. For the same reason, we relate the following application of Sage (*Salvia glutinosa*) in the Oberland: they spread the stalks of this plant under the beds, or draw a broom, made of them, gently and slowly along the floor: by this means the unpleasant insects that sometimes harbour in such situations are destroyed, as they get fastened to the glutinous surface of the plant.

Place.	Elevation.	
Berenboden	6225.	Though neither the soil nor exposure were favourable, Larches, a foot and a half in diameter, and sixty feet high, grew here; the Siberian Pine and common Fir also flourished; 600 feet higher, some of these trees were seen growing on the top of a rock, probably the loftiest spot at which they will vegetate. Neither the Alpine Pine nor Aquatic Alder were to be found here; only some wild Medlar trees. None of these, with the exception of the larch, appeared degenerated; while on the mountains of Berne, forest trees grow stunted; and perish gradually, in proportion to the height at which they are found.
	7400.	At the highest point of the Pass of Fluella, forest vegetation had ceased. Abundance of Poa alpina, however, was growing; and this is invaluable in a country where, owing to the mountainous nature of the pastures, the crop of fodder is always small and precarious, and every blade of grass has to be collected with the utmost care. It is common to plant those kinds of trees, whose foliage and young branches afford the most nourishing food. In places inaccessible to cattle, the Swiss peasants may be sometimes seen making hay with crampons (hooks to prevent them from falling) on their feet.

The grass is cut, not three inches high, in some places three times a year, and in the valleys the fields are as close shaven as a bowling-green, all the inequalities being cut with a pair of scissors. In Switzerland, as in Norway, for the same reason, the art of making hay seems to be carried to its highest state of perfection. In Iceland, the poor people are often seen on their knees scooping out the grass with a clasp-knife, from between the interstices of the rocks. A little below the highest point of the Pass of Fluella, in a southern aspect, the first Firs, mixed with Juniper plants, were to be seen; whereas on the northern side, only Azaleas grew, whose rusty-coloured foliage indicated the extreme severity of the climate.

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Alp Rose.

The distance which usually intervenes on the Alps between the growth of trees and the limits of perpetual snow, is 2700 feet; the tree that is found nearest the snow being the Pinus Abies, or Spruce Fir. Ericineæ and Rhododendron ferrugineum (*fig.* 398.), commonly called the Alp Rose, do not attain a greater height than 7020 feet, and the distance between the snow and the culture of corn is 4200 feet. Plantations on mountains in England seldom succeed at a greater elevation than 1200 feet.

Subsect. 3.—*Zoology.*

The zoology of Switzerland participates in the singularity of its geographic features, and exhibits several native animals designed by Providence to live only in the wild recesses of mountainous districts. Among these, the Ibex (*Capra Ibex*) (*fig.* 399.) is the most singular, and deserves particular notice. Although not much larger than a domestic goat, its horns are enormous, measuring sometimes two feet and a half long; and are so formidably robust, that the observer wonders how an animal apparently so heavily encumbered, can at the same time be possessed of such surprising activity. Around these horns are cross ridges, or knots, the number of which generally indicates the age of the animal. The Swiss hunters assert that the horns do not reach their full size until the twelfth year. The Ibex dwells only among the highest and most inaccessible precipices of the Alps, particularly those of the Tyrol, and appears to delight in frequenting the frightful regions of eternal snow; yet even here they are pursued by their adventurous hunters; and their numbers both in Savoy and Switzerland are much diminishing, while they are almost extinct in the Pyrenees. The chamois, somewhat less wild, yet apparently formed for more activity, inhabits the same mountainous ridges. The descent of the domestic goat from the Ibex has been asserted with too much confidence: it rests, like many other similar questions, on mere supposition.

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Ibex.

The Alpine Marmot (Arctomys marmotta) is another of the most remarkable European quadrupeds. Although thick and ungraceful in appearance, it is endowed with surprising

instinct. These animals live among the mountains in families, and form under-ground burrows; when they quit these retreats for procuring food, one of the number, as a guard, ascends an elevated spot near their common habitation. If this sentinel observes an enemy, or any unusual object, he utters a shrill cry, upon which the whole company run to their retreat; or, if too far, instantly seek a hiding-place in an adjacent cleft or hole. Such and so various are the modes by which Almighty Providence enables its weakest creatures to guard against dangers they are otherwise unable to escape from. These marmots pass the whole winter in a deep lethargy, during which time they take no nourishment. The fur is thick, warm, and well known as a valuable article of dress. The wolves of the Alps are both numerous and formidable, and the foxes live undisturbed by the huntsman.

The ornithology of Switzerland has received much attention from the naturalists of Geneva; among whom Professor Bonelli is most celebrated. The large vultures of Germany are occasionally seen; but there is another, called the Bearded Vulture, or Vulture of the Alps (*fig.* 400.), more peculiar to this country. It is a noble bird, partaking more of the courage and sanguinary nature of the true falcons, than of the vultures, to which group, from the structure of the bill, it nevertheless more strictly belongs. Its length is above four feet seven inches; the neck is covered with pointed feathers, and under the bill there is a tuft of stiff setaceous feathers, not unlike a brush. Its strength is so great, that it attacks sheep, lambs, and young stags, and even the chamois and ibex fall victims to its rapacity. It builds in such inaccessible precipices that its nest is very rarely seen. A smaller species of the same family, the *Vultur percnopterus*, although more properly an inhabitant of the south, extends its range to Geneva, where it is not uncommon.

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Bearded Vulture.

The insects of Switzerland are more numerous than the face of the country, so thinly clothed with wood, might lead us to suppose; and many peculiar species of trout and salmon abound in the lakes.

Of the domestic animals, there is a good race of draught horses, some being not unfit for the carriage. They are generally compactly made, vigorous, and sober; while, to fit them for enduring the severe cold they are so frequently exposed to, nature clothes the head, limbs, and feet with an unusual quantity of long hair. The cattle are said to be of a large size, but the particular breed has not been mentioned.

The alpine Spaniel (*fig.* 401.) is a remarkable variety of the Spanish breed, preserved with much care by the humane monastics on Mount St. Bernard. These beautiful dogs are generally two feet high, and full six feet long; the eyes have a peculiar appearance, attributed by some to the snow, and the high windy regions they inhabit. They are kept for the preservation of those unfortunate travellers who are so often lost in crossing the pathless snows of these dangerous mountains. Two of these dogs are sent out in severe weather, to scour the mountains, one with a warm cloak fastened to its back, the other with a basket holding a cordial and provisions. Their instinct and sagacity are so great, that it is said they will discover persons perishing with cold and fatigue; and if too exhausted to proceed, they will lie close to these unfortunate travellers, to afford them warmth from their own bodies, and assist their resuscitation.

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Alpine Spaniel.

SECT. III.—*Historical Geography.*

Ancient Helvetia was celebrated among the Romans for the boldness of its natural features, and the rude valour of its people. The Helvetians were fully made known by the grand expedition undertaken with a view to make themselves masters of Gaul, and the discomfiture of which formed the first military exploit of Cæsar. They were soon afterwards reduced to the state of a conquered people, when, like the rest of their neighbours, they found compensation for the loss of their valour and liberty by a culture and civilisation which had before been unknown to them.

During the middle ages, Switzerland shared the fate of the rest of Europe, being over-run by the Huns, Burgundians, Franks, and other barbarous invaders. By them it was formed into a number of feudal possessions, under the supremacy, first of Charlemagne, then of the house of Burgundy, and lastly of the house of Hapsburg, which, having seated itself on the imperial throne, rendered Switzerland an appendage of the German empire. These invasions,

and this degree of subjection, were, however, chiefly confined to the plain east of the Aar, on which are situated the cities of Berne and Friburg; while the regions of the Forest Cantons and the higher mountain valleys remained in a state of rude and pastoral independence, and their vassalage to the empire was little more than nominal.

The era of Swiss independence had been prepared by the rise of the free cities, Berne, Friburg, and Glarus, which, surrounded by walls, began to defy the power of their liege lord. While the emperors, however, proceeded with discretion, their rights of feudal supremacy were not contested; but the violence of Albert, who endeavoured to make the whole of Switzerland an hereditary domain of his family, brought on a crisis. The most heroic resistance was made by the Forest Cantons, under the impulse received from the daring courage of Tell. A long struggle ensued; but the battle of Morgarten, in which the Austrian forces were completely routed by the mountaineers, secured the independence of Switzerland, though an hundred years elapsed before a full recognition of it could be extorted. A confederacy of thirteen cantons was formed; and the Swiss, engaged in wars among themselves, and with the neighbouring powers, soon acquired a high military reputation. Their infantry, an arm hitherto of little account, established its character as the first in Europe; and the battle of Morat, in which the duke of Burgundy was defeated and slain, spread the terror of their name throughout Europe. When they came into collision, however, with the great powers, and especially France, united and organising its force into regular armies, they could not maintain their ground; and in the battle with Francis I. at Marignano, their military strength was completely broken. Their reputation for valour, however, and the jealousy of powerful neighbours, secured them from any foreign invasion, till that great convulsion which shook the whole of Europe.

The French revolution agitated all the monarchical states, to which it was in open and entire opposition; but Switzerland, which had so long presented to Europe a model of the purest forms of liberty, had seemingly nothing to fear. The Directory, however, soon showed that they employed the name of liberty chiefly with a view to the general subjection of Europe. They presented to the cantons a new form of constitution, which was called *unitaire*, and which the latter were required to adopt. As the Swiss clung to their old and venerated forms of freedom, an army was led into their territory, which, after a brave and even enthusiastic resistance on the part of the Forest Cantons, succeeded in compelling the whole to submit to French dictation. Switzerland became a new theatre of war between the French, Austrians, and Russians; but the first were finally triumphant. After the accession of Napoleon, the cantons made an attempt to regain their independence, which was repressed, though with some popular concessions; but the country was held as a vassal state; and Geneva and the Valais were incorporated with France. On the downfall of Napoleon's power, Switzerland again became an independent state, though the new division into twenty-two cantons has been retained, and the distinction of sovereign and subject states, certainly an odious feature of the old system, has not been resumed.

Sect. IV.—*Political Geography.*

That free constitution, which formed the boast of the cantons, was, in Berne, Friburg, and some others, modified by a large and somewhat severe mixture of aristocracy. Admission to public offices was limited to a few privileged families; and the sway over the Pays de Vaud, the Grisons, and other subject states, was somewhat rigorous. This distinction of sovereign and subject territories has now been happily obliterated, and even the interior predominance of aristocratic principles is much broken up; but each of the states has a particular constitution of its own, though all are united by the common tie of the federal government.

The Helvetic diet consists of deputies from the different cantons, which meet once a year. Extraordinary meetings may also be called, on the requisition of any five cantons. This assembly takes cognisance of every thing that concerns the foreign relations and the general defence of the country. The diet has been much occupied by the unwelcome remonstrances made by the great sovereigns respecting the liberties taken by the press in regard to the conduct of foreign powers, and the refuge allowed to individuals who have become obnoxious through their support of liberal opinions. On these points, the diet, conscious of their own inferior power, have been generally obliged to yield.

The army of the Helvetic confederacy is formed out of contingents which each canton, in proportion to its population, is obliged to furnish. From these are made out an entire amount of 33,000 men, which, if judiciously posted in the strong approaches to the country, might, it is supposed, secure them against almost any attack. But this, though seconded by the *levée en masse* of a brave peasantry, would not probably avail Switzerland in an unsupported contest with any of the great powers. In consequence, also, of the modern principles of war, which require the equal support of every point of an immense line of operations, it is supposed that a country holding this military position with regard to so many of the great powers cannot escape the occupation of its territory by one or other of them. A remarkable peculiarity in the military system of Switzerland is also the employment of its citizens in the service of foreign powers as a stipendiary force. This system has long pre-

vailed, and is regularly authorised by the government. The number in 1816 was estimated at 30,000. The singular consequence follows, that these subjects of the most democratic state in Europe, form, in many cases, the main instrument in supporting the arbitrary power of foreign princes.

SECT. V.—*Productive Industry.*

In the economy of Switzerland, poverty must of necessity be a prominent feature. Many portions of its surface are absolutely inaccessible; a considerable portion of the remainder is incapable of yielding any thing that can conduce to the support of man; while even its most favoured spots are far inferior in productiveness to the fine plains of the neighbouring regions. Human industry, however, is employed with laudable zeal in extracting from an ungrateful soil the utmost possible amount of produce.

Agriculture here is necessarily and strictly limited by nature. Wheat can be produced only in the finest plains of the low country; maize ceases to grow at the height of 2500 feet; potatoes, barley, and rye can only in favourable exposures be raised so high as 4400, though there are few instances of their reaching above 5000 feet. The country is thus in a great measure dependent on its neighbours for the supply of grain; and its chief wealth consists in its pastures. The meadows are mown with peculiar care and diligence. In stormy nights, amid the rugged heights of the Alps, herdsmen watch in the châlets or rude log-houses, and call out continually to the cattle, otherwise they would take fright, and fall down the precipices. The produce of the dairy has been carried to great perfection in many districts, particularly those of Glarus, the Upper Engadine, and the plain of Friburg; and their Gruyère and other cheeses approach to the excellence of those of Lombardy. The Swiss cows give more milk than the Italian; nine cows producing daily a cheese of twenty-five pounds' weight. The people of Bergamo are celebrated for their management of sheep fed on the fine pastures of Mount Splugen. Generally, in these upper districts, the owner pastures his own little field; and a village in many cases holds one in common. But the increased population, and the consequent subdivision of property, has reduced them in many instances to severe distress. Wine, sometimes of considerable value, is made on the lower declivities of the hills, particularly in the Pays de Vaud; and there is an ample growth of timber, chiefly of fir and pine.

Manufactures in Switzerland were long confined to rude products for domestic supply; but about the end of the last century, the cotton manufacture, in some even of its finer forms, was introduced into St. Gall and several of the southern cantons; and the looms, dispersed through the hills and upper valleys, enabled the peasantry to live in plenty, and caused an increase of population. In St. Gall alone, there are said to have been at one time from 30,000 to 40,000 females employed in embroidering muslin. Since the peace, however, the general and remarkable decline in the demand for manufactured goods has thrown many out of employment, reduced the wages of others, and produced great individual distress. Geneva has a long established and still extensive manufacture of watches. The number of workmen, indeed, which in 1782 was 5000, is now reckoned at 2027; but the value of watches exported is 3,000,000 francs, while in 1802 it was only 2,375,000. The improvement of skill and machinery seems to have increased the produce, while the number of workmen has diminished. There is also an extensive manufacture of this commodity in Locle, and other districts of the principality of Neufchâtel.

The commerce of Switzerland, from its inland situation, is of course very limited, and consists chiefly in the exchange of its cattle for corn, colonial produce, and fine manufactures. Its central position occasions some inland transit trade between France, Germany, and Italy. The great road over the Simplon, though constructed by Napoleon for military purposes, produces very important commercial advantages. A wonderful combination of industry and boldness has been displayed in carrying roads across the most rugged and precipitous Alpine barriers. Such are the Devil's Bridge (*fig.* 402.), spanning a fearful chasm, through which the Reuss thunders; the bridge over the Tesino; the road cut along the precipitous side of the Gemmi, about 1600 feet high. Across the great and rapid rivers

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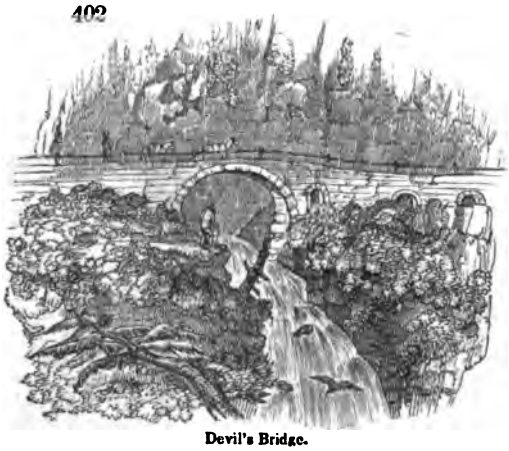

Devil's Bridge.

several large wooden bridges have been constructed; but the largest, that at Schaffhausen, was destroyed by the French. The roads are generally good, especially in the canton of Berne, where they are carried to the tops of the highest mountains. Canals are scarcely known, or indeed compatible with the structure of the country. The one begun near a century ago, to connect the lakes of Neufchâtel and Geneva, remains unfinished. The two cantons of Uri and Tesino completed in 1830 a very fine road over the St. Gothard, the passage of which was before only practicable for mules and horses. In traversing the Schellenen, it has opened a winding passage through enormous masses of granite, so as nowhere to produce any laborious ascent. A new bridge is substituted for the famous Devil's Bridge, and the gallery of the Underloch is widened. The emperor of Austria has opened a superb route over the Splugen, with a view of facilitating the communication between Lombardy and the Tyrol, from which Switzerland derives great advantages.

Sect. VI.—*Civil and Social State.*

The population of Switzerland has not been ascertained by any very accurate census. The number upon which the contingent of the cantons has been calculated is 1,687,000; but this is now undoubtedly too small. The actual amount in 1827 was reckoned by Bernoulli at 1,978,000; but, by a careful estimate, in the learned Prussian work entitled *Hertha*, it is raised to 2,013,100.

As to national character, the Swiss enjoy the reputation of being a plain, honest, brave, and simple people, among whom linger the last remnants of antique and primitive manners. Their fond attachment to their native country is conspicuous, even amid the necessity which compels them to abandon it, and to enter the service of the neighbouring powers. It is observed that no sooner is the *Ranz des Vaches*, a simple mountain air, played in their hearing, than the hardy soldiers melt into tears. An ardent love of liberty, ever since the grand epoch of their liberation, has distinguished the Swiss people. Now, indeed, the influx of strangers, and the general mixture of nations, is said to have broken down much of what was antique and peculiar in Swiss manners; and travellers have complained that every mode of turning to account their temporary passage is as well understood as in the most frequented routes of France and Italy. The manufacturing districts also have undergone a great change; but in the higher pastoral valleys there may still be traced much of the original Swiss simplicity.

The religion of Switzerland is divided between the Protestant and the Catholic. Schweitz, Uri, Unterwalden, Lucerne, Zug, Friburg, Soleure, Valais, and Tesino, are Catholic: St. Gall, Appenzell, Aargau, and Grisons are mixed. The others may be ranked as Protestant; though even in Geneva there are 15,000 Catholics. The Protestant churches were at first strictly Calvinistic, both as to doctrine and discipline; but the Genevan church has in a great measure renounced the tenets of this school of theology. The Presbyterian form of church government, however, still prevails throughout Protestant Switzerland. The Catholic religion exhibits this peculiar feature, that, instead of being, as usual, combined with high monarchical principles, it is established among the most purely democratic of the Swiss republics. The Protestant cantons, however, are observed to be decidedly the most flourishing and industrious.

Learning, though not very generally diffused throughout Switzerland, has been cultivated with great ardour at Geneva and Zurich, both of which have a character more decidedly intellectual than most European cities. The names of Haller, Lavater, Rousseau, Gessner, Zimmermann, and Sismondi throw lustre on Swiss literature. The great printing and bookselling trade which Geneva enjoyed while the French press laboured under severe restrictions, has been dimished. Elementary knowledge is general throughout the Protestant population; and the systems of education established by Pestalozzi at Yverdun, and Fellenberg at Hofwyl, have drawn general attention. The habits and general forms of life are substantially German, modified, in the western cantons, and especially in Geneva, by a somewhat intimate communication with France.

Sect. VII.—*Local Geography*

The following table exhibits the extent of the different cantons, and their population, according to an estimate formed in 1827:—

	Square Leagues.	Contingent	Population.		Square Leagues.	Contingent	Population.
Geneva	8	280	51,940	Zurich	90	3760	221,270
Vaud, or Waadt	140	2264	175,350	Friburg	70	1240	88,700
Valais, or Wallis	194	1220	71,200	Soleure, or Solothurn	25	904	52,080
Tesino	168	1804	101,000	Basle	24	918	54,360
Berne	350	5694	257,710	Schaffhausen	16	488	32,140
Lucerne	72	1734	118,600	Appenzell	20	972	54,200
Uri	48	236	14,940	St. Gall	80	2620	148,250
Schweitz	44	602	35,170	Grisons, or Gran Bundten	220	1600	97,900
Unterwalden	24	382	25,220	Aargau	72	2410	151,510
Glarus	42	482	27,680	Thurgau	32	1320	80,730
Zug	11	250	14,200	Neufchatel, or Neuenburg	30	980	51,880

Geneva (*fig.* 403.), though a small canton, is the most interesting of any, from the intellectual culture of its citizens, and the moral influence which they have exercised over Europe. It is situated at the western extremity of the lake bearing its name, where the Rhone, which has entered as a turbulent mountain torrent, issues a broad and pellucid stream. Geneva is not a handsome or well-built town: the lower streets are shabby, dirty, and ill-paved; and the houses, four or five stories high, are overshadowed by awkward projections supported by wooden props. In the upper quarters there are some ranges of good houses; but the Genevans bestow their chief study on their country residences, which, commanding the most magnificent views of the lake and the Alps, are their constant abode, unless during the depth of winter. The government of Geneva is less democratic than formerly, the elections being no longer direct, but taking place by two stages: the aristocratic party also maintain their point of keeping up a small garrison, and shutting the gates of the city nightly, though the last is attended with considerable inconvenience. Geneva is a sort of literary capital, not only of Switzerland, but of this part of Europe. Both sciences and arts are cultivated with peculiar ardour. Even the ladies attend lectures, read, and draw, more than in any other city of Europe. The names of Calvin, De Luc, Saussure, Bonnet, Tissot, and other eminent men, adorn its literary annals. Population, 26,000.

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Geneva.

The approaches to Mont Blanc, through the districts of Cablais and the Faucigny, belong politically to Savoy; but as they are usually made from the side of Geneva, the idea of Switzerland is invariably excited by this mountain and its mighty appendages. A journey of eighteen leagues leads the traveller to the Vale of Chamouni, one of the most remarkable spots in Europe, and where the fullest display is made of all the features of savage and Alpine grandeur. This valley was only discovered in 1741, by Pococke and Windham, but has since been visited by numerous admirers of the sublime in nature. It forms a long and narrow dell, through which the Aveyron (*fig.* 404.) dashes its impetuous waves, and above which rises, like a stupendous wall, Mont Blanc, with all its train of attendant mountains. Numberless glaciers, which have descended in successive ages hang from its sides in the most varied and irregular forms. The valley being nearly 3400 feet above the sea, Mont Blanc towers more than 12,000 feet perpendicularly above it, and with its attendants of Dôme du Gouté, Col de Géant, and La Côte, shoots numberless pinnacles or needles into the region of clouds, which alternately hide and disclose this awful range. By these gigantic objects Chamouni is as it were enclosed from the rest of the world. The first object of the traveller is to ascend Montanvert, where he enjoys a comprehensive view of these extraordinary scenes, and is on the borders of the "sea of ice," which spreads from this point for many leagues, with its surface broken like the waves of a stormy ocean. The bold traveller, exerting alike hands and feet, traverses these rugged masses, and in so doing, enjoys a variety of the most striking scenery. To behold, however, Mont Blanc in all its glory, it is necessary, by a rugged and even somewhat perilous route, to ascend the Breven; from which this loftiest of the European summits appears in full view, and its snows shine with a lustre which the eye can scarcely endure. The neighbouring summits of the Col de Balme and the Buet afford also fine views of Mont Blanc. For a few daring adventurers, a mightier task remains, that of scaling the sides of this king of mountains, and reaching its long unapproached pinnacle. It was not till about 1760 that Saussure, having his attention strongly directed towards Alpine phenomena, formed the daring conception of passing those walls of ice, those immense glaciers and unfathomable snows, by which it was guarded. He offered a reward to those who should trace before him this arduous path, or should even make an attempt, though abortive. Repeated efforts were made, but in vain, till 1786, when Dr. Paccard and James Balmat, having left Chamouni on the morning of the 7th of August, and spent the night on the mountain of La Côte, happily reached the summit at half past six on the following evening. At eight on the ensuing morning they reached Chamouni, with their faces and eyes swelled, and overwhelmed with

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Source of the Aveyron.

fatigue. Saussure then determined, under the guidance of Balmat, to undertake the expedition in person. On the first of August, 1787, he formed a caravan of eighteen, furnished with provisions, poles, ropes, ladders, and scientific instruments (*fig.* 405.). They left Chamouni at seven in the morning, spent their first night on the mountain of La Côte, and the second on the Dôme du Gouté, 11,970 feet above the level of the sea. Next day the declivity was found so steep, and the snow so hard, that they were obliged to cut steps in it with hatchets; but at eleven they had reached the summit in view of all the inhabitants of Chamouni, among whom Madame Saussure and her two sisters were observing them through a telescope; at which moment all the bells of the village were rung. The travellers near this highest point felt a quickening of the pulse, a burning thirst, extreme debility, and difficulty of respiration. At every ten or twelve steps they were obliged to pause for breath, and spent two hours in going over the last 150 paces. These unpleasant symptoms have always been experienced by those who encounter the very rarefied air of the higher atmosphere. The next ascent was made by Colonel Beaufoy, and the most recent is that by Mr. Auldjo, who has published an interesting narrative of his route.

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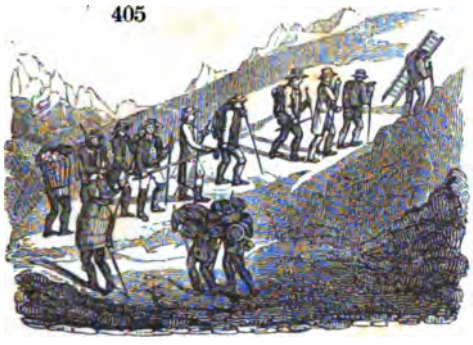

Ascent of Mont Blanc.

The canton of Vaud formed originally part of the duchy of Savoy, from which, about the time of the Reformation, it was conquered by Berne; but that state, imbued with aristocratic ideas, communicated to its new acquisition few of the privileges which it had acquired for itself. It ruled the Pays de Vaud, or Waadtland, as a subject state, and with some degree of severity. In the shock occasioned by the French invasion, this territory obtained its emancipation, and exists now as a separate and independent canton. It occupies the whole northern border of the Lake of Geneva, which does not, like the southern, consist of Alps piled on Alps, but of gentle hills and smiling valleys, gradually sloping upward to the moderate elevation of the Jura. The vines of this region are considered equal to any in Europe; and the wine made from them has a very considerable reputation. Lausanne, the capital, enjoys perhaps the finest site of any city in the world. Placed in the very centre of the Leman Lake, it commands a full view over that noble expanse, and those ranges of mightiest Alps, on the opposite shore, which are terminated by the awful and snow-clad pinnacles of Mont Blanc. These attractions, heightened by those derived from the adventures of Rousseau, and his celebrated romance, have drawn a multitude of visiters and residents from all parts of Europe, who seek there an agreeable and beautiful retirement. The town, however, is neither large nor well built, having only 10,000 inhabitants, though it has a fine Gothic cathedral. The house of Gibbon, and the cabinet where he wrote the last lines of his history, are visited by travellers. Vevay, farther up the lake, is a somewhat thriving little village, almost equal in beauty to Lausanne, and commanding singularly fine views towards the head of the lake. The house where Ludlow resided and died, the Castle of Chillon, and the Clarens of Rousseau, give to this place a classic character.

The canton of the Valais extends from the head of the Lake of Geneva along the upper valley of the Rhone, which almost wholly composes it. The Valais is one of the most singular, picturesque, and romantic regions that are to be found on the globe. It consists of a deep valley, 100 miles long, and from two to twelve in breadth, shut in on both sides by the most enormous mountains that are to be found in Europe; on the south by the Italian chain, St. Bernard (*fig.* 406.), Monte Rosa, the Simplon, and St. Gothard; on the north by the Schreckhorn, the Wetterhorn, the Grimsel, the Gemmi. The lower districts, extending along the Rhone, are sheltered from every wind, and sometimes exposed to a scorching heat, like that of the centre of Africa. Their plains produce grain, rich pastures, and even luxuriant vines; but these gifts of nature are not improved with the same diligence as in the neighbouring cantons of Berne and Vaud. Till lately there was no road by which a carriage or wagon could pass, except one from the west, which, at St. Maurice, is so straitened, as to leave barely room for the river; and the gate of the Roman bridge there

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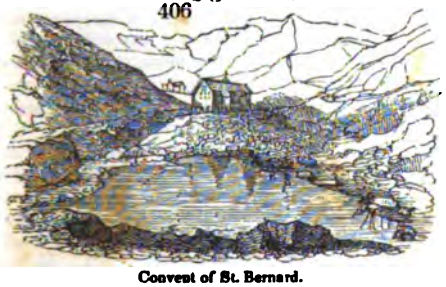

Convent of St. Bernard.

might shut in the whole Valais; but Napoleon formed a magnificent route by Meillerie, to lead to his great military line over the Simplon, which will favour indeed the commerce of the Valais, but will expose it to become the theatre of war. This territory is exposed above all others in Switzerland to the goître, that dreadful and disgusting malady, which at once deforms the body and destroys the faculties of the mind. The Valais is quite a rural district; yet its little capital, Sion, or Sittenwilt, with 3000 inhabitants, affords a market where its peasantry can exchange their cattle and the produce of their fields. This place, the Sedunum of the Romans, is picturesque and antique; its castle is perched on a pyramidal rock; and its old-fashioned walls, towers, and gates, suggest the idea of a fortified monastery. The baths of Leuk are situated 5000 feet up the declivity of the Gemmi. They are considered of great virtue in cutaneous disorders, and are therefore frequented, though little provision has been made for the comfort and accommodation of the visiters; nor do they find any of the usual amusements of watering-places; but they may enjoy the extraordinary grandeur of the views from the neighbouring summits, extending over the most elevated of the Alpine ranges.

The canton of Berne, separated from the Valais by the great chain of the central *horns* or peaks, though shorn of its subject territories, holds still somewhat the most prominent place among the Swiss republics. Berne is divided into two parts, of which the northern, comprising a great part of the plain of Switzerland, is well cultivated by a laborious peasantry. The southern consists of the Oberland, or the declivity of the mountain range, a tract entirely employed in pasturage, where $1500 to $2000 is esteemed a fortune, and tiled dwellings and glass windows give to their owners a reputation of wealth. The pressure, however, of a redundant population has lately reduced them to severe distress.

The city of Berne (*fig.* 407.), generally considered the capital of Switzerland, is situated in the centre of the plain, in a commanding position above the Aar, which nearly encircles it on all sides. Fine and ancient woods reach almost to the gates of the city, bearing a noble and even majestic aspect. It suggests the idea of a Roman town; yet its handsomest houses and most sumptuous edifices date all since 1760. The Gothic Cathedral of the fifteenth century, the church of St. Esprit, the mint, and the hospital, are among its principal public buildings; while the private mansions are handsome, and solid rather than showy. But the magnificence of Berne is mainly derived from its wide and lofty terraces, commanding the most superb views over the plain beneath, and the entire range of the Alps; from the spacious fountains by which its streets are supplied and refreshed, and from the fine avenues of trees which penetrate through the city. The constitution of Berne is the most aristocratic in Switzerland; and notwithstanding the diminished power of the state, this spirit is still in full operation. The scramble and contest for office, even among the nearest relations, is said in this small sphere to be as eager as in the greatest capitals. Berne is not, nor ever was, a literary town; yet it has a public library, to which some valuable collections are attached. Population 18,000.

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Berne.

The region of the glaciers, extending along the southern border of the canton, is, next to Mont Blanc, that where Alpine scenery is displayed on the grandest scale, and in the most awful and picturesque forms: the approach is by Thun, situated on the lake of the same name. This little city, more ancient than Berne, and still showing its strong castle seated on a rock, is interesting only by its vicinity to these sublime phenomena of nature, which the valleys of Lauterbrunn and Grindelwald (*fig.* 408.) afford the most favourable opportunity of viewing. These valleys contain rich pastures, and a considerable population; good roads, carried through every part of the canton of Berne, extend a considerable way up the mountains. They thus afford advantageous spots for viewing those vast scenes of ice, snow, and desolation, which are in their immediate vicinity. Here woods and meadows border close on immense glaciers, which, descending from the upper regions, cover an extent of about 1200 square miles of territory. From various points are descried those gigantic peaks which overlook this part of Switzerland, the Jungfrauhorn or Virgin Peak, the two Eighers, the Wetterhorn, the Schreckhorn, the

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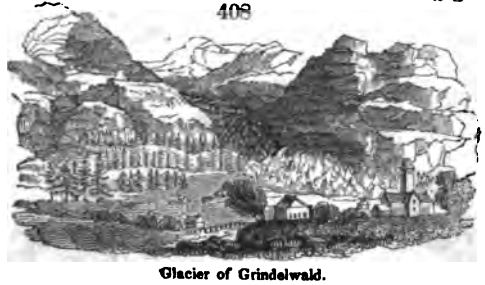

Glacier of Grindelwald.

Finster-Aar-horn, and many others almost as lofty. Occasionally only, amid the clouds and mists which float continually around them, these mountains show the grandeur of their forms, and the pure white of the eternal snows with which they are covered. The scene is rendered more awful by the sound of the avalanche, which, in the higher Alps, is repeated at short intervals, like peals of thunder. Numerous and lofty cascades dash continually down these immense steeps; of which the most celebrated is the Staubbach (*fig.* 409.),

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Fall of Staubbach

formed by the Luschine, a tributary of the Aar: the stream falls from the height of 800 feet, but as the mass of water is not very great, it spreads out in its descent into a species of white vapour, which, when illumined by the rising sun, produces very brilliant effects. Other falls in the interior of the mountains are represented as equal or superior to the Staubbach. Two passages from this canton lead into the Valais; that over the Gemmi is one of the most remarkable of the Alpine passes. A great part of the road is cut in the face of a perpendicular rock 1600 feet high, and so smooth, that from below no vestige of a track can be discovered. Strangers, who are carried in a litter, must have their eyes bandaged, to prevent their growing giddy by looking down upon so fearful and dizzy a height. The passage of the Grimsel is not so perpendicular, but it is longer and more generally rugged, through a wondrous succession of peaks and glaciers. Near the summit is erected an *hospice*, where a man is stationed, with an allowance for receiving and entertaining travellers.

The Four Forest Cantons, Schweitz, Uri, Unterwalden, and Lucerne, the cradle of Swiss liberty, form a territory situated to the east of Berne, and north of the Valais. Here Nature begins to lay aside that awful and rugged character which she wears in the southern chains, and in those enclosing the Rhone. The mountains are not so continuous, or so lofty; their upper regions are not covered with eternal snow, nor do fields of ice, descending from their sides, cover the surrounding plains. The two chief heights, those of Pilate and the Righi, rise solitarily, like columns, to the height of 6000 or 7000 feet, above ranges which do not exceed half that elevation. This country is crossed in all directions by the Lake of Lucerne, or of the Four Forest Cantons, of great extent, and shooting branches in every direction, which form each as it were a separate lake. Although the objects are not so grand as in the valleys of Chamouni or of the Rhone, yet the great variety of aspects, the interchange of rural and Alpine scenery, the numerous villages and farm-houses perched on the cliffs, render the banks of this lake, in the opinion of many, the most pleasing portion of Swiss landscape. Some of the mountains, from their solitary elevation, and the crumbling materials of which they are composed, inspire a constant apprehension of their breaking down; a dread which was realised about twelve years ago, by the fall of the Rossberg, which covered eight or ten leagues of territory with a chaos of ruins, and buried several villages, with 457 of the inhabitants, who were unable to effect their escape. All this territory is marked with spots memorable in the annals of history and patriotism; the scene of the exploits of Tell, and of the glorious resistance made by the little cantons to the overwhelming power of the house of Austria. Among the mountains, the most lofty and remarkable is Mount Pilate, about 7000 feet high, rising in seven peaks around a little lake, in which, according to the fanciful tradition of the country, Pontius Pilate drowned himself. It contains calcareous substances, with numerous shells and petrifactions. The Righi, however, though little more than 5000 feet high, is the summit most frequently ascended by travellers. From its southern position, between the Lakes of Lucerne and Zug, it forms a sort of outpost of the great body of the Alps, whence the entire middle chain of snowy peaks is seen from end to end, and behind them many summits of the Italian range, though those of Mont Blanc and Monte Rosa are hidden by the enormous masses in front of them. To the south appear the plains and lower vales of Switzerland, stretching away to the frontiers of France and Italy; and the view is so extensive, that from a cottage recently erected on this summit, the sun may be seen every day to rise and set over all Switzerland.

The cities in this pastoral region do not attain to any important magnitude. Schweitz, the cradle of the Helvetic confederacy, to which it has given its name, is little more than a handsome village, situated amid the finest mountain pastoral scenery, rich meadows and verdant knolls, embosomed amid rugged cliffs and Alpine peaks, tinkling with the sound of innumerable cow-bells, and echoing with the tune of the Ranz des Vaches. Lucerne, on the west, with 6000 inhabitants, is considerably larger, and may be considered the capital of the Forest Cantons. It is nobly situated on an arm of the lake enclosed by Mount Pilate, and others of the loftiest heights in this part of Switzerland. The city itself is adorned by some ancient and venerable structures, and its different parts, separated by branches of the lake,

are connected by wooden bridges of remarkable length and peculiar structure. The cabinets of Lucerne contain some interesting Swiss antiquities; but the object which especially attracts the attention of strangers, is the great model of the Four Cantons, and the bordering tracts of Switzerland, which the late General Pfeffer spent a laborious life in framing. On a scale of fifteen inches to the square league, and of ten inches to the height of 9700 feet, he has modelled in relief all the objects of nature and art, every valley, every mountain and mountain path, every village, steeple, and even every cottage. The traveller here sees beneath his eye, in a narrow compass, all those mysteries of the Alps which it has cost him so much labour personally to trace.

The canton of Unterwalden is likewise entirely mountainous and pastoral, enclosed by the high chain of the Surren Alps which surround it with an almost inaccessible rampart. They form a decided contrast to the soft pastoral valleys of the interior, particularly that which surrounds the little lake of Sarnen. Here all that is gloomy and rugged in Alpine scenery, its peaks of naked rock, its glaciers, its snowy mountains, and roaring torrents, disappear, and are succeeded by rounded hills of the most graceful form, covered with woods and the freshest verdure, and interspersed with rural abodes, which soften without impairing that character of stillness and solitude which reigns through every part of this romantic valley. Sarnen is the capital of what is called the Obwald; but Stantz, in the Nedwald, is the chief city of the canton. Uri, which only touches the lake at the south-east point by its little capital of Altorf, composes the fourth democratic canton. It extends to the south over a wild and awful range of the loftiest Alps, including that mass named Mont St. Gothard, which was supposed, till within this half-century, to contain the most elevated peaks in Europe. Altorf has 2000 inhabitants. At Burglen, near Altorf, is the chapel of Tell, (*fig.* 410.) on the spot where he leaped ashore, and escaped from the hands of his tyrants.

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Chapel of William Tell.

Zug is a little lake, with an encircling canton, the smallest and least populous in Switzerland. The lake, whose waters are the deepest of any except Constance, is surrounded by pleasing pastoral hills, but of moderate elevation; on the south, however, the colossal heights of Righi and Pilate are reflected in its waters, and the dim forms of the glaciers appear in the distance. The town is seated on a hill so immediately above the lake, that in 1435, a whole street fell in with its walls and towers, and sixty persons perished. The place is ancient, and has produced many warriors, who distinguished themselves both in the native and foreign service. Morgarten was the scene of the celebrated victory of 1300 free Switzers over 20,000 Austrians, in 1315.

Zurich, to the north-east of Zug, and approaching to the German border, is one of the most interesting of all the cantons, by its intelligence, industry, and prosperity. The long lake on which it is situated partakes not of the grand and awful character which marks the scenery of the High Alps. Its hills, green to the summit, are covered with villages, culture, and habitations; nature appears only under a soft and pleasing aspect; though still to the south, a dim view is obtained of the snowy ranges of the High Alps. The city of Zurich is situated on the Limmat, where it issues out of the northern extremity of the lake. Zurich, with 11,000 inhabitants, is the literary capital of German Switzerland. Even in the middle ages it was called "the learned;" and the exertions of Zuinglius at that era to restore the lost rights of religion, reason, and humanity, threw a lustre on its name. In modern times its fame has been chiefly poetical and imaginative; and the works of Bodmer, Gessner, Zimmermann, and Lavater have excited interest throughout Europe. Painting and music have also been cultivated with greater ardour and success than in any other part of Switzerland. Zurich possesses a library of 40,000 volumes, with some manuscripts of importance: it has also valuable collections in the different branches of natural history.

The three cantons of Glarus, St. Gall, and Appenzell, which extend along the eastern frontier towards Germany, present a somewhat different aspect from those of the west and centre. They are covered to a great extent with mountain ranges, which, rising to the height of 7000 or 8000 feet, do not reach the regions of perpetual snow, or pour down avalanches or glaciers into the plains beneath; but rise in varied shapes, dark, rugged, and awful. One of the leading features is the Lake of Wallenstadt, twelve miles long and three broad, where the naked cliffs rise in picturesque grandeur to an amazing height, and dip so perpendicularly into the water, as to leave very few points at which a boat can approach. These mountain walls elsewhere enclose luxuriant valleys, which open as they proceed north toward the Lake of Constance; and a great part of St. Gall and Appenzell presents a level surface. Into these cantons the cotton manufacture has been introduced on a great scale, and has converted the hardy huntsmen and husbandmen of the Alps into weavers and

embroiderers. For some time a great increase of wealth was thus produced. On the return of peace, however, the stagnation of demand, and the formidable rivalry of Britain, threw a great number out of employment. When M. Simond passed through in 1817, he witnessed extreme distress; beggars swarmed everywhere, and many were suspected to have died of famine, or at least of deficient nourishment. A considerable revival, however, is said to have recently taken place. At the same time, the original simplicity and honesty of the Swiss are supposed to have been greatly impaired by this change of habit.

Among the small capitals of those three cantons, St. Gall is the most important and the most ancient. It contains 9000 inhabitants. During the ninth and tenth centuries, it was considered as the greatest seat of learning in Europe. This ray of light emanated, it is said, from Icolmkill in Scotland, of which the patron saint of this place was a native. Many of the manuscripts used in the early editions of the classics were drawn from the archives of its monastery. Its abbots were princes of the German empire, through whom and its nobles the city was involved in war and politics; and, being eclipsed by more modern schools, lost its fame for learning. The monastery was suppressed in 1798; and the canton is divided between Catholics and Protestants, the former being 99,000, and the latter 58,000. Appenzell has adopted the manufacturing system in its fullest extent; and on its limited territory maintains the most dense population of any part of Switzerland. Though removed beyond the domain of the Higher Alps, it has several steep summits, which command extensive views over the neighbouring territories of Tyrol and Swabia. The population of Appenzell is divided into two quite distinct portions: the rural, which is almost all Catholic; the manufacturing and commercial, almost wholly Protestant. Glarus is situated among the most rugged and rocky tracts of this part of Switzerland. The town lies deep in a valley, overhung by ramparts of rock so elevated, that the sun in winter is seen only for four hours of the day. This buried situation, narrow crooked streets, its diminutive and antiquated houses, with low entrances, heavy doors, and walls painted in fresco, the silence and stillness which prevail, unite in suggesting the idea of a city dug out of the earth, like Pompeii or Herculaneum. Near the place is a mass of rocky fragments, which fell in 1593 from the top of the Glarnisk, a height of about 8000 feet.

Thurgovia, or Thurgau, which stands on the Lake of Constance, and on the Swabian border, is a tract in which Switzerland loses almost entirely its peculiar character. Only to the south, on the side of the Tockenburg, rise hills of 2000 or 3000 feet high, covered with rich meadows and Alpine pastures. The rest consists of valleys and plains of extreme fertility, covered with vines and rich harvests. Two crops of flax are raised in the year, and an extent of several leagues is covered with plantations of pears and apples, from which excellent cider is made. There are manufactures of very fine linen, which are still carried on, though the trade is injured by the general use of cotton stuffs. This territory, previous to the late revolution, was in a very oppressed state. Eight of the other cantons had possessions within it, which they ruled by bailiffs with great severity; and numerous lords and convents had seigniorial rights, rendering those liable to them little better than slaves. It is now erected into a separate and independent canton, of which the little city of Frankenfeld, the ancient residence of the bailiffs, is the capital.

The city of Constance, though now belonging to the Grand Duchy of Baden, is locally attached to Thurgau and to Switzerland. Constance, during the middle ages, was one of the great imperial cities, possessing a population of 36,000 souls, extensive linen manufactures, and a great inland trade. In the fifteenth century it became more celebrated by the great council, which attracted 2300 princes and nobles, 18,000 ecclesiastics, 80,000 laymen, and, it is added, 1500 courtesans. The Romish church was then in its utmost height of power; the archduke of Austria was put to the ban of the empire; John Huss and Jerome of Prague, the early movers of the Reformation, after having appeared under a safe-conduct from the emperor, were ignominiously kicked out of the council, and hurried to the stake. This spiritual tumult seems to have banished from Constance the industry by which it had flourished; and when, in 1548, it fell under the yoke of Austria, its decline became still more rapid, and its population is now reduced to 5000 souls: the grass grows in the streets, and the great hall, 153 feet long and 60 broad, in which the council met, whose iron doors turn on plated hinges, and have the figures of warriors carved on them, is now employed as a yarn market. Constance is, however, beautifully situated on the lake of the name, called by the Germans the Boden See. This wide expanse appears divested of all the awful grandeur which marks the interior regions; but the wide circuit of its cultivated shores, swelling into gentle hills, bears an aspect peculiarly soft and pleasing. Although this lake be everywhere surrounded with level country, it has the deepest water of any in Switzerland.

Schaffhausen is a small canton, which, situated entirely on the north or German side of the Rhine, scarcely belongs to Switzerland, unless through political ties arising out of peculiar circumstances. The capital, with 6,000 inhabitants, was originally an imperial town; its burghers extended their possessions till, with a view to security, they sought and found admittance into the Helvetic League. The territory of Schaffhausen is diversified by hills of moderate elevation, thickly planted with vines, the produce of which is held in estima-

tion. The town of Schaffhausen was distinguished by a magnificent wooden bridge over the Rhine, constructed in 1758 by an artist of the canton of Appenzell; but this celebrated erection was burned down by the French in April, 1799, when the Austrians obtained possession of Schaffhausen. It is still, however, distinguished and visited on account of one of the grandest phenomena of nature, the great fall of the Rhine (*fig.* 411.); to which Europe presents nothing equal. Its height does not exceed sixty feet; but it is remarkable for the violence of its fall, the sound of its thundering waves, and the cloud of foam which it throws into the air. The human voice is not heard in its close vicinity, and the sound reaches to the distance of six miles.

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Fall of the Rhine.

Basle, or Basel, forms another frontier canton, and has also characters which make it only imperfectly Swiss. A steep mountain chain shuts it completely in from the rest of Switzerland. The slopes of this chain, in looking towards Basle, and descending to the fertile plain on the Rhine, are covered with rich pastures. Basle was founded by the Romans, and remained always a city of consequence during the middle ages; but it was in the fifteenth century that it rose to its greatest splendour. Advantageously situated on the Rhine, which here begins to be navigable, and placed at the point of union between France, Switzerland, and Germany, it attained a high degree of commerce and wealth, and distinguished itself likewise by a zealous cultivation of literature and the arts. That of painting was early carried to perfection; and the names of Erasmus (as a resident), Paracelsus, Œcolampadius, to which it has since added those of Euler and the Bernoullis, gave it a distinguished name in the world of letters. Basle, though it has lost much of its former importance, is still the seat of a great transit trade; and forms an important military position, from its command of the first stone bridge over the Rhine. In the fine arts, this city could boast of Holbein, an eminent painter, many of whose best works still adorn its edifices. It contains 16,000 inhabitants.

The three cantons of Argovia, Soleure, and Friburg stretch from Basle in a south-westerly direction along the course of the Aar. They compose, along with a part of Berne, the great plain of Switzerland, enclosed on one side by the ridge of the Jura, and on the other by the great range of the central glaciers. This plain presents not the same dead level as those of France and Italy, but is diversified by detached hills and branches of the Jura, some of which rise even to the height of 5000 or 6000 feet; but these hills are green to the summit, generate no glaciers, and in summer throw off altogether their covering of snow. This district, accordingly, contains the richest pastures in Switzerland, whence are produced the Gruyère and other cheeses, which enjoy so high a reputation throughout Europe.

The cities of this district are among the most important in the confederacy. Friburg, with 7000 inhabitants, picturesquely situated, partly on an irregular ridge of rocks, surrounded with walls and towers, partly on the plain beneath, forms a sort of capital of Catholic Switzerland. The aristocratic spirit was carried in Friburg to an extraordinary height; the magistrates had even, as at Venice, a secret council, by whose invisible machinery all affairs of state were conducted. An eminently exclusive spirit still prevails, which shuts the door against new men and new ideas, and opposes those modern improvements which have found a place in the neighbouring cantons. Some steps, however, though on a contracted scale, have been taken towards the instruction of the lower orders. Morat, in this canton, a small town on a little lake of the same name, is immortalised by the splendid victory gained by the Swiss in 1476 over the great army of the Duke of Burgundy, Charles the Rash; a victory which, after their long struggle, sealed the existence and independence of the Helvetic confederacy. On the spot was erected a building, containing the bones of the 15,000 fallen invaders, which was destroyed by the French in 1798, but an obelisk has since been raised to commemorate the event. Soleure is a small town and canton, governed by the same aristocratic spirit as Friburg. The canton includes some part of the range of the Jura; and the Wessenstein, a summit immediately behind the city, commands, according to Ebel, the finest view of the whole range of Swiss mountains that can anywhere be obtained. Aarau is a small town in the plain of Argovia, celebrated for its rich meadows, and the skill with which they are irrigated. Aarburg, in the same canton, deserves notice, as the only fortified town in Switzerland.

The canton of Neufchâtel, including Vallengin, covers a long line of the summits and valleys of the Jura. This extensive ridge, which in a direction from north-east to south-

west, separates Switzerland from France, does not reach that immense height, nor exhibit those rugged and broken forms, which give to the southern chains so grand an aspect. It rises in the form of a steep high terrace, resembling, from a distance, a lofty wall. The summit commands the most extensive and delightful views over the plain of Switzerland, and the vast ranges of Alps beyond. The sides being neither covered with perpetual snow, nor subject to the inroad of glaciers, are clothed with large and dense forests of fir in the upper regions, and below chiefly of walnut trees; groves of which enclose almost every village. The political constitution of Neufchâtel presents several anomalies: it has long been subject to the King of Prussia, a sovereign absolute elsewhere, but here strictly limited, exercising the executive power by his governor, but leaving the legislative functions in the hands of the people. Neufchâtel has another relation, by which it forms one of the confederated cantons of Switzerland. On the whole, the people of this district have long enjoyed civil and political rights more ample than in most other parts even of Switzerland; and they accordingly drew numerous emigrants from the aristocratic cantons. Thus encouraged, and stimulated by the difficulties with which they had to contend, they have displayed an industry and ingenuity worthy of admiration. Not only the ground is carefully cultivated, but manufactures, especially watch-making, have been carried to great perfection.

The interior details of the Jura possess considerable interest. The long lake of Neufchâtel, twenty-seven by six miles, extends along its base, overhung by the rocks and woods of the mountain ranges above. A good deal of timber, floated down from the heights, is conveyed along this lake and the smaller one of Bienne, which is prolonged in the same direction to the Aar and the Rhine. Neufchâtel is a small well-built town, with 5000 inhabitants, finely situated above the lake near its northern extremity, and commanding delightful views over a great part of Switzerland. A Mr. David Pury, one of its citizens, who made a fortune of 6,000,000 livres, left the whole to be employed in the improvement of his native city. There are still remains of the now ancient castle from which it derives its name. Yverdun, at the opposite end of the lake, is also an ancient and agreeable town. The inhabitants are distinguished by intellectual culture, and their city by the residence of Pestalozzi, and by the schools formed according to his ingenious system. The high valleys of Locle and Chaux de Fond consist almost entirely of rocks scattered with the wildest and rudest irregularity; yet they are covered with a thriving and industrious population, employed in the making of lace and watches. The natives of these valleys have distinguished themselves by many important inventions in the latter art. A remarkable object near Locle consists in a deep hollow sunk into the heart of the mountain, near the dark bottom of which are three mills, placed vertically one above the other. In the valley of Travers is Motiers, celebrated by the temporary residence of Rousseau, who has also given distinction to the little lake of Bienne and its island of St. Pierre; though it does not, in M. Simond's opinion, display any picturesque beauty corresponding to the enthusiasm with which he describes it.

The Grisons form an extensive canton in the south-east, bordering on Italy and the Tyrol. They ranked, till lately, rather as allies than members of the Swiss confederation, being formed into a league, or rather two leagues, called the Grey League, and the League of the House of God, to which was even added another, called the League of the Ten Jurisdictions. They are now incorporated with the rest of Switzerland under the character of a canton, and form a very extensive one. The district is altogether mountainous and pastoral, though nowhere rising to that extraordinary elevation which is attained by the more westerly chains. Mount Splugen, however, almost rivals the rugged horrors of the valley of Schellenen: the Rhine in its early course flows along its northern border. A road, passable in summer for carriages, has lately been, with great labour, constructed over the Splugen, and forms one of the principal passages into Italy. The people are rather a peculiar race, composed in a great measure of the descendants of the ancient Rhætians, who speak singular dialects, called Roman and Ladin: being compounded of the Latin with that of the original native tribes. The Grisons have an interior government entirely popular, divided into twenty-six jurisdictions, each of which is a little republic in itself: the towns are small, situated along the course of the Rhine. Coire or Chur, the capital of the canton, and the original seat of the League of God's House, is an ancient episcopal city, still containing some Roman monuments, and a cathedral of the eighth century. Population 3,000. Dissentis and Truns, at which latter the Grey League was signed, are only agreeable and picturesque villages.

The new canton of Tesino, extending along the Italian border, includes the southern slope of that loftiest range of the Alps by which Italy is separated from Switzerland. It is composed of a succession of about thirty Alpine valleys, among which the chief are Levantin, Riviera, Brenna, and Bellinzone, which, though of great elevation, enjoy, in consequence of their fine southern exposure, a much milder climate, and produce grain on sites more elevated than can be done on the northern side of the mountains. Their pastures, indeed, are less rich, not being fed by those numerous streams, which descend from the snows and glaciers of the higher Alps. The whole country, however, and particularly the shores of the great

lakes of Maggiore and Lugano, with their ornamented islands, present almost an Elysian aspect. Yet this, the most favoured by nature of all the cantons, is debased by a poverty, an indolence, and a neglect of culture unknown in any other part of Switzerland. The meanest races in German Switzerland are superior to those of this district; it has even been said that not a hog exists in the former, which would content itself with the habitations in which the peasantry of the latter reside. The people are in fact of Italian origin, and never enjoyed that independence which is the genuine birthright of the Swiss peasant. Their different valleys were respectively subject to Unterwald and the other cantons, who proved oppressive masters. Under the last arrangement, however, this yoke was broken; and Tesino being now formed into an independent canton, may gradually emerge from its present depression.

The local features of this canton are varied and singularly beautiful. The three lakes of Maggiore, Como, and Lugano, though partly belonging to Italy, are in a great measure included within it, and they combine Alpine sublimity with all that is soft and rich in Italian landscape. The Lago Maggiore, which extends forty-four miles in a winding line from north to south, with a breadth nowhere exceeding seven miles, presents many enchanting spots, among which the Borromean Islands are particularly admired. Originally masses of naked rock, they were, by the care of Prince Borromeo of Milan, formed into terraces, and covered with the most brilliant vegetation: they command magnificent views, on one side upon the chain of the Alps, and on the other upon the plains of Italy. Locarno, a small town, finely situated at the northern head of the lake, serves as a market to the inhabitants of the numerous Alpine valleys which open into it. Lugano, or Lavis, on the lake of the same name, is the largest town in the canton, and has a considerable number of churches and convents, with 4,000 inhabitants. The Lake of Lugano is broken into several gulfs, all of which display the most picturesque and enchanting scenes. It abounds remarkably in fish, of which 20,000 to 30,000 quintals are sent weekly to Milan. This territory has given birth to many eminent architects. The northern head of the Lake of Como is enclosed by some of the rudest mountains of the Grisons, where the scene passes gradually into the rich and ornamented plain of Lombardy. Meantime the dignity of capital of the canton is given to Bellinzone; a pleasant small town, commanding the Val d'Airolo, and consequently the passage over the St. Gothard. By this road there is a constant conveyance of cattle and horses, of which an extensive autumnal market is held near Bellinzone. A remarkable battle was fought here in 1422, between the Swiss and the Duke of Milan.

CHAPTER XIII.

GERMANY.

GERMANY is an extensive country, situated in the centre of Europe, and exercising a most powerful influence in the political affairs of that continent. There is a peculiar complication in its geography; for not only is it divided into numerous states, of every varied dimension and description, but several of these have large portions of the neighbouring countries, particularly of Poland and Italy, incorporated into their territory. We propose, however, in our description, to preserve that of Germany as much as possible distinct and entire, only exhibiting, under the political section, the general jurisdiction and resources of the great states, from whatever source these may be derived.

SECT. I.—*General Outline and Aspect.*

Germany proper is bounded on the north by the German Ocean or North Sea, by Denmark and the Baltic; on the east by Poland and Hungary; on the south by Italy and Switzerland, from which it is separated by the vast chain of the Alps; on the west by France, Belgium, and Holland. It lies nearly between 45° and 55° north latitude, 5° and 20° east longitude; extending about 700 miles from north to south, and 550 from east to west. Its entire dimension is estimated by Hassel at 11,664 German square miles, equal to about 250,000 British.

In its surface, Germany, in different parts, presents remarkable contrasts. The southern border is formed by the Alps, the loftiest and steepest chain in Europe. The Oerteler and the Great Glockner, in the Rhætian or Tyrolese Alps, are respectively 14,400 and 12,000 feet high; scarcely inferior to the highest in Switzerland. From this main southern barrier, lower branches descend and cover a great part of the interior country; the Black Forest (Schwartzwald) in Swabia; the Seven Mountains (Siebengebirge) on the Rhine; the metalliferous chain of the Hartz in Bohemia and Saxony; and the forest of Thuringia. Of these, however, few rise higher than from 3000 to 4000 feet. They terminate about the middle of Germany, and the whole north forms a portion of that vast continuous plain which reaches from the Bay of Biscay to the frontier of Asia. On the extreme north it falls so low that dikes and other barriers are necessary to prevent it from being overwhelmed by the ocean. This very level surface, and the great extent of sand impregnated with marine exuviæ, suggest the idea that this region had emerged from the sea more recently than the

southern division. Notwithstanding the disadvantages occasioned by rugged mountains in the south, and sandy plains in the west, Germany is on the whole a very productive region. Its finest soils are found in the intermediate tracts, between the steep elevations of the south and the dead flats of the north. The latter are best fitted for corn; while vines and fruits cover the declivities and valleys of the southern territory.

The greatest rivers of Europe roll through Germany in various directions. The sovereign Danube rises in its furthest western border, from the heart of the Black Forest, in the duchy of Baden. Formed by the union of three small streams, it flows nearly due east through the whole breadth of southern Germany, watering the dominions of Wirtemberg, Bavaria, and Austria; and then continuing through Hungary and Turkey, till it terminates in the Black Sea. Its course through Germany is estimated at 432 miles. It becomes navigable at Ulm; but the current being afterwards obstructed by cataracts, it contributes less to internal commerce than any of the great German rivers. From the grand Alpine boundary on the south it receives important streams, the Lech, the Iser, the Inn, the Ens; but on the opposite side the Bohemian mountains press it too closely, and direct all their waters northwards. The great Illyrian tributaries, the Save and the Drave, though partly German, do not enter the Danube till after passing the Hungarian frontier. The Rhine rises in the heart of Switzerland, from the rocky pinnacles of St. Gothard; and in approaching Germany passes through the Lake of Constance, where for some further space it divides Germany from Switzerland, and afterwards from France. Near Landau it enters Germany, within whose borders it pursues its course, till, passing into the Netherlands, it spreads into several broad estuaries, and reaches the ocean. Its largest eastern or German tributary is the Mayn, which flows through Franconia, and by its junction marks the commencement of the Lower Rhine. From the same side come the smaller streams of the Neckar, the Lahn, the Roer, and the Lippe. The Moselle and the Meuse, which pour in large accessions from the west, belong more to France than to Germany. The Rhine is navigable from the point where it leaves Switzerland, and is of signal benefit to internal commerce. The other great rivers are altogether German. The Elbe rises on the frontiers of Silesia, and follows a winding course through Bohemia, where, by its tributaries the Moldau and the Eger, it drains all the waters of that mountainous region. Thence it enters Saxony; and after pouring a broad stream through the various territories of northern Germany, flows, by a wide estuary, into the German Ocean. Its entire course is reckoned by Hassel at 523 miles. It receives fifty-three tributaries; of which the principal, besides those already mentioned, are the Saale, bringing the waters of the Unstrut, and the Havel bringing those of the Spree. The Elbe is a navigable river of vast benefit to German commerce. The Oder, a Prussian river, rises in Moravia, flows through Silesia, Brandenburg, and Pomerania, and enters the Baltic by three mouths, after a course of 392 miles. It receives the Neisse and the Bober. The Weser, the river of Westphalia, is formed by the union of the Werra and the Fulda. From that point, under the name of Weser, it has a course of 200 miles; the previous course of the Werra had been 126 miles. The navigation is good both on the Weser and its tributaries.

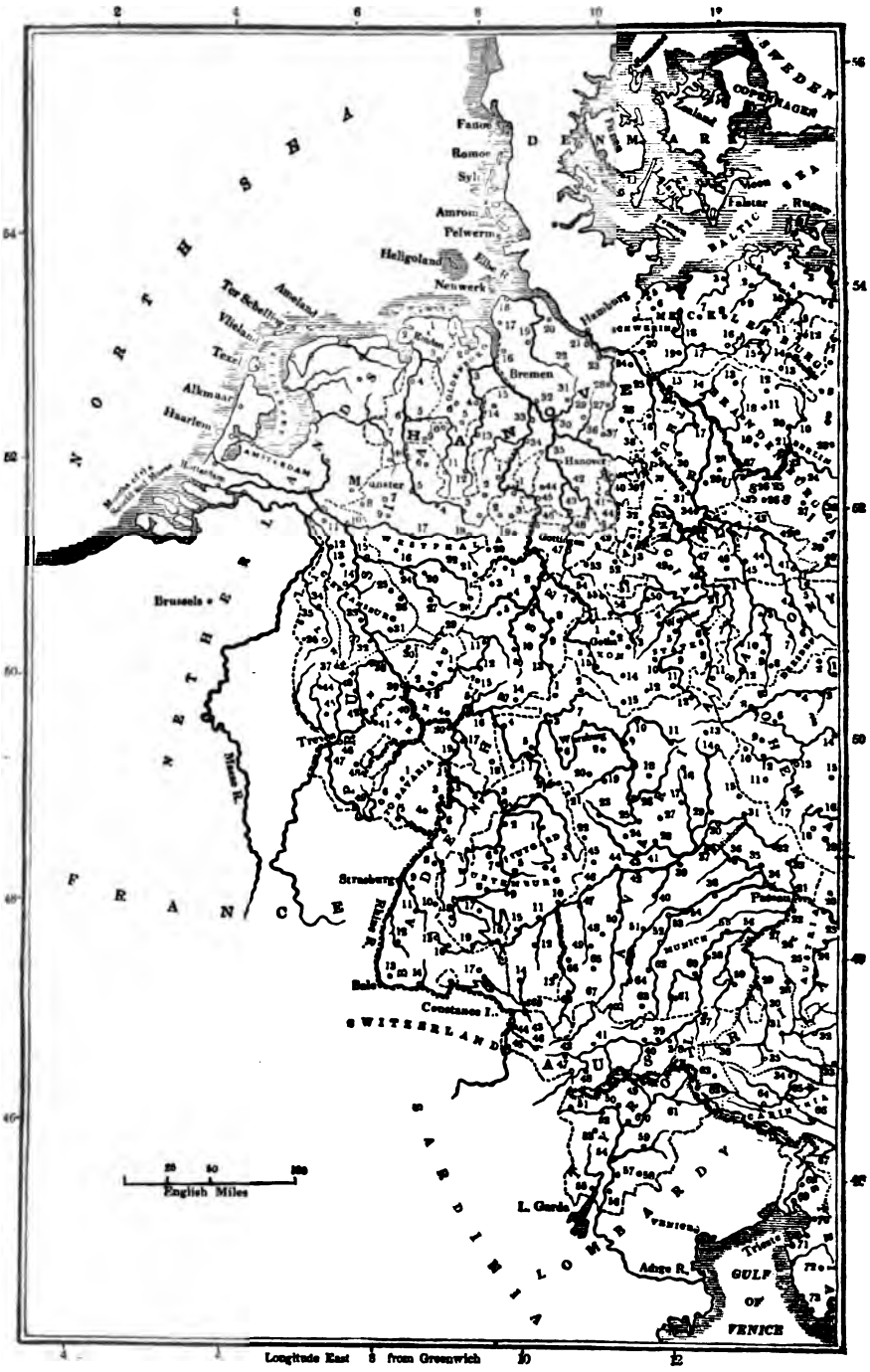
Few lakes of any consequence are formed by the German waters. The Lake of Constance, indeed, called by the Germans the Boden See, has the greater part of its circuit in Germany; but it may be more properly classed with the lakes of Switzerland. The Lake of Garda, though it touches the Tyrol, is more than half Italian. All the others are small and local features. On the coast of the Baltic there are some *haffs*, which are, strictly speaking, bays, being connected with the sea by narrow channels.

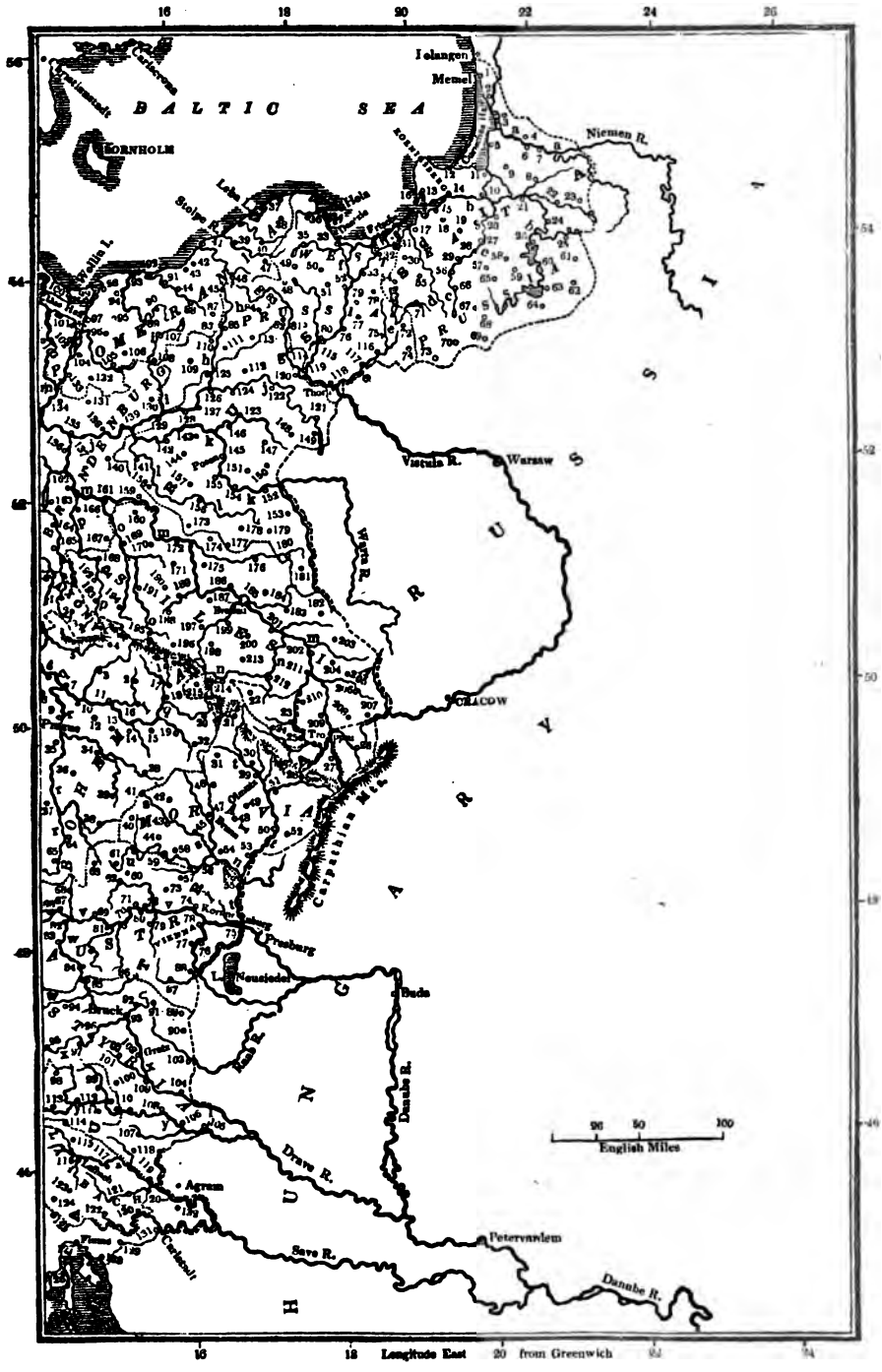
Sect. II.—*Natural Geography.*

Subsect. 1.—*Geology.*

I. *Primitive and transition districts.* The primitive and transition districts in Germany are the following:—1. The more central parts of the Alps, from the east of Switzerland to the plains of Hungary. 2. The western, or the ranges on the east side of the Rhine, which includes much of the Black Forest (Schwartzwald), the Odenwald, and the Spessart. 3. Rhenish slate mountains, in north-western Germany, which extend from W.N.W to E.N.E. 4. Hartz mountains, in the kingdom of Hanover. 5. The great eastern primitive and transition country, including the mountainous parts of Bohemia, Moravia, Silesia, Saxony, and part of Bavaria; bounded on the south by the Danube; on the west by the flat country of Regensburg, Amberg, Bayreuth, Coburg, Meiningen, Berka; on the north by the plains of Thuringia, Saxony, Lower Lusatia, and Silesia in the neighbourhood of Eisenach, Rudolstadt, Altenburg, Leipzig, Wurzen, Grossenheim, Gorlitz, Lauban, Lignitz, and Breslau; on the east by the flat country on the Oder and on the Lausitz; and forming a great connected system.

Primitive rocks. The chief Neptunian rocks of this division are gneiss and mica slate, with subordinate clay slate, whitestone, limestone, and hornblende rock: the Plutonian are granite, syenite, &c.


NORTH SEA
Faroe
Romoe
Syl
Amrum
Pelworm
Heligoland
Ems R.
Neuwerk
Ter Schelling
Ameland
Vlieland
Texel
Alkmaar
Haarlem
Amsterdam
Rotterdam
Hamburg
Bremen
Hanover
Münster
Brussels
Meuse R.
Trèves
Strasburg
Rhine R.
Basle
Constance L.
SWITZERLAND
L. Garda
Adige R.
GULF OF VENICE
SWEDEN
COPENHAGEN
BALTIC SEA
Falster
Rügen
Oder R.
Elbe R.
Weser R.
Ems R.
Moselle R.
Danube R.
Inn R.
Munich
Passau
Vienna
Trieste
FRANCE
SWITZERLAND
AUSTRIA
HUNGARY
BOHEMIA
SAXONY
HANOVER
WESTPHALIA
BAVARIA
WURTEMBERG
HESSE
THURINGIA
BRANDENBURG
POMERANIA
SILESIA
MORAVIA
Longitude East 5 from Greenwich 10 15
English Miles


BALTIC SEA
Memel
Niemen R.
Vistula R.
Warsaw
Cracow
Carpathian Mts.
Pressburg
Buda
Danube R.
Drave R.
Save R.
Agram
Peterwardein
Danube R.
English Miles
Longitude East from Greenwich

Gneiss. Sometimes the felspar in the gneiss is in the state of *kao-lin* or porcelain earth, as at Hafnerzell, on the Danube. Occasionally it contains talc, or crystals of hornblende; more rarely the mica is supplanted by *graphite* or black lead, or the graphite is disposed in veins, as at Hafnerzell, Ruderding, Langensdorf, Leitzerberg, and Zwiezel, in Bavaria; and in different parts of Lower Austria. In the western Böhmerwald, the mica in the gneiss is replaced by iron mica, small contemporaneous veins of the Neptunian granite of the Schwartzwald, and other ranges. 2. *Mica slate.* This rock exhibits its usual characters; is observed passing into gneiss, and also alternating in beds with that rock.

Subordinate primitive rocks. Clay slate, limestone, and hornblende rock, are the principal subordinate primitive rocks.

1. *Clay slate.* This rock, which is almost entirely composed of minute scales of mica, rests upon the mica slate, and also alternates with it. These three rocks occur more or less distinctly stratified; and in many parts in Germany, the direction of the strata is from N.E. to S.W.

References to the Map of Germany.—West Part.

NORTH PART.

PRUSSIA.

1. Damgarten
2. Stralsund
3. Greifswalde
4. Loitz
5. Treptow
6. Anklam
7. Pasewalk
8. Lychen
9. Neust Eberswalde
10. Liebenwalde
11. N. Ruppin
12. Reinsberg
13. Wittstock
14. Perleberg
15. Lenzen
16. Salzwedel
17. Osterburg
18. Westerhausen
19. Nauen
20. Oranienburg
21. Spandau
22. Berlin
23. Muncheberg
24. Mittenwalde
25. Potsdam
26. Werden
27. Brandenburg
28. Genthin
29. Burg
30. Gardelegen
31. Magdeburg
32. Halberstadt
33. Egeln
34. Schonbeck
35. Belzig
36. Treuenbrietzen
37. Luckenwalde
38. Luben
39. Luckau
40. Seftenberg
41. Liebenburg
42. Dahme
43. Witteeberg
44. Torgau
45. Duben
46. Delitzsch
47. Halle
48. Merseburg
49. Eisleben
50. Coleda
51. Sonderhausen
52. Nordhausen
53. Dunderstadt
54. Heiligenstadt
55. Muhlhausen
56. Eisenach.

MECKLENBURG.

1. Ribnitz
2. Tissin
3. Rostock
4. Wismar
5. Schonburg
6. Rehna
7. Bruet
8. Gustrow
9. Laage
10. Demmin
11. Stavenhagen
12. N. Brandenburg
13. Mirow
14. N. Strelitz
15. Robel
16. Plau
17. Parchim
18. Schwerin
19. Ludwigslust
20. Roitzenburg.

OLDENBURG.

1. Jever
2. Varel
3. Oldenburg
4. Wildeshausen
5. Vechta
6. Cloppenburg.

HANOVER AND BRUNSWICK.

1. Aurich
2. Embden
3. Detern
4. Papenburg
5. Hasseline
6. Meppen
7. Nordborn
8. Bentheim
9. Furstenau
10. Quakenbruck
11. Osnabruck
12. Bohmte
13. Diepholz
14. Bassum
15. Bremen
16. Stotel
17. Bremer Leche
18. Cuxhaven
19. Bremervorde
20. Stade
21. Haarburg
22. Tostedt
23. Winsen
24. Blekede
25. Dannenburg
26. Bodenteich
27. Ullzen
28. Ebstorf
29. Bergen
30. Hudemuhlen
31. Soltau
32. Verden
33. Hoya
34. Nienburg
35. Hanover
36. Celle
37. Eschede
38. Worsfelde
39. Helmstadt
40. Brunswick
41. Wolfenbuttel
42. Hildesheim
43. Ahlfeldt
44. Springe
45. Hamein
46. Holzmunden
47. Gottingen
48. Eimbeck
49. Goslar.

ANHALT.

1. Dessau
2. Cothen
3. Thlefelde
4. Brackenburg.

DETMOLD.

1. Rintela
2. Detmold
3. Blomberg.

WEST PRUSSIA.

1. Minden
2. Herford
3. Wiedenbruck
4. Warendorf
5. Munster
6. Ibbenbuhren
7. Coesfeldt
8. Borken
9. Dulmen
10. Wesel
11. Cleves
12. Gueldres
13. Creveldt
14. Dusseldorf
15. Muhlheim
16. Dortmund
17. Lunen
18. Lippstadt
19. Paderborn
20. Lichtenau
21. Britzen
22. Arensberg
23. Iserloha
24. Hazen
25. Elberfeldt
26. Lennep
27. Attendorn
28. Winterburg
29. Siegen
30. Akenkirchen
31. Homburg
32. Bonn
33. Cologne
34. Julliers
35. Aix la Chapelle
36. Eupen
37. Blankenheim
38. Ahreweiler
39. Coblentz
40. Bacarach
41. Traerbach
42. Moselle
43. Dhaun
44. Prugm
45. Bitthurg
46. Treves
47. Sarreburg
48. Tholey
49. Sarrebruck.

NASSAU

1. Weilburg
2. Nassau
3. Limburg
4. Wiesbaden
5. Frankfort.

HESSE.

1. Volkmarsen
2. Cassel
3. Arolsen
4. Waldeck
5. Gemander
6. Melsungen
7. Eschwege
8. Rothonburg
9. Hersfeldt
10. Alsfeldt
11. Marburg
12. Giessen
13. Fulda
14. Gelnhausen
15. Homburg
16. Offenbach
17. Darmstadt
18. Erlach
19. Worms
20. Mayence.

BAVARIA.

1. Kaisersiautern
2. Frankenthal
3. Spire
4. Landau
5. Pirmasens
6. Deux Ponts
7. Meisenheim to Hesse
8. Birkenfeld to Oldenburg.

BADEN.

1. Wertheim
2. Bischofsheim
3. Morsbach
4. Heidelberg
5. Mannheim
6. Carlsruhe
7. Pforzheim
8. Baden
9. Offenburg
10. Froodenstadt
11. Haslach
12. Freyburg
13. Lorrach
14. Wadshutt
15. Villingen
16. Donaueschingen
17. Stockach.

SOUTH PART.

BAVARIA.

1. Bruckenau
2. Neustadt
3. Gmunden
4. Aschaffenburg
5. Esselbach
6. Wartzburg
7. Schweinfurth
8. Burglein
9. Bamberg
10. Lichtenfeldt
11. Bayreuth
12. Hof
13. Rudwitz
14. Marscheneit
15. Waldmunchen
16. Tumbach
17. Amberg
18. Grafenburg
19. Neustadt
20. M. Bibert
21. Rotenburg
22. Dunkelsbuhl
23. Anspach
24. Ellingen
25. Roth
26. Nuremburg
27. Neumarkt
28. Beilingries
29. Schwandorf
30. Burglengefeldt
31. Cham
32. Regen
33. Grafenau
34. Vilshofen
35. Deggendorf
36. Straubing
37. Ratisbon
38. Landshut
39. Neustadt
40. Pfaffenhofen
41. Ingolstadt
42. Neuburg
43. Eichstadt
44. Donauwerth
45. Nordlingen
46. Dillingen
47. Burgau
48. Schwabmunchen
49. Mindelheim
50. Augsburg
51. Dachau
52. Munich
53. Freising
54. Mosburg
55. Muhldorf
56. Markt
57. Borghausen
58. Wasserburg
59. Frauenstein
60. Aibling
61. Tegernsee
62. Volkrathausen
63. Kochel
64. Weilheim
65. Kaufbeuren
66. Memmingen
67. Fussen
68. Kempten
69. Lindau.

WIRTEMBERG.

1. Halle
2. Heilbronn
3. Dunkelsbuhl
4. Gmund
5. Ealingen
6. Ludwigsburg
7. Stutgard
8. Tubingen
9. Reutlingen
10. Ulm
11. Ehingen
12. Biberach
13. Leulkirch
14. Ravensburg
15. Riedlingen
16. Sigmaringen in Hohenzollern
17. Hechingen in Hohenzollern
18. Rotweil
19. Tutlingen.

SAXON STATES.

1. Eisenach
2. Gotha
3. Arnstadt
4. Weimar
5. Jena
6. Gera
7. Altenburg
8. Greitz
9. Neustadt
10. Rudolstadt
11. Lobenstein
12. Sonnenberg
13. Coburg
14. Schleusingen
15. Meiningen.

SAXONY.

1. Leipzig
2. Borna
3. Waldheim
4. Oschatz
5. Grossenhayn
6. Dresden
7. Freyberg
8. Marienberg
9. Tschopau
0. Glauchau
11. Plauen
12. Schneeberg.

AUSTRIA.

1. Leimeritz
2. Toplitz
3. Laun
4. Saaz
5. Rakonitz
6. Luditz
7. Carlsbad
8. Ellenbogen
9. Tepl
10. Plau
11. Bischofsteinitz
12. Mies
13. Pilsden
14. Beraun
15. Przibram
16. Horazziowitz
17. Klautau
18. Winterburg
19. Prachatitz
20. Rohrbach
21. Passau
22. Scharding
23. Wels
24. Schwanstadt
25. Volkbruck
26. Ried
27. Braunau
28. Thalgau
29. Salzburg
30. Hallein
31. Radstadt
32. Haus
33. Muran
34. Gmund
35. Hof
36. Mittersill
37. Kuffstein
38. Rattenberg
39. Schwaz
40. Innspruck
41. Imst
42. Grics
43. Bregen
44. Feldkirch
45. Vaduz
46. Bluden
47. Finstermunz
48. Prutz
49. Starzing
50. Meran
51. Glurns
52. Latsch
53. Male
54. Lavis
55. Riva
56. Roveredo
57. Trent
58. Borgo de Valsugana
59. Cavalese
60. Botzen
61. Brunneke
62. Lientz
63. Motray
64. Greifenberg
65. Spital
66. Villach
67. Tolomina
68. Goritz
69. Monfalcone
70. Trieste
71. Isola
72. Pisino
73. Pola.

Rivers in Prussia.

a Havel
b Elbe
c Mulda
d Unstrut.

Rivers in West Prussia.

a Ems
b Lippe
c Roer
d Sieg
e Rhine
f Moselle.

Rivers in Germany.

a Ems
b Fulda
c Leine
d Lahn
e Mayn
f Rhine
g Neckar
h Lex
i Danube
j Fraun
k Salza
l Inn
m Iser
n Ammer
o Lech
p Iller.

2. *Limestone.* This rock, which is in the state of marble, occurs not only in regular, continuous, and extensive beds, but also in comparatively short beds, many of which are sometimes observed in the same mountain following each other in uninterrupted succession for miles.

3. *Hornblende rocks.* Fine displays of these rocks occur in the gneiss of the Böhmerwald; and enclose, as is the case in Scandinavia, repositories of magnetic iron ore. There is a remarkable resemblance in the primitive Neptunian rocks of both countries. In the Böhmerwald we find not only the same varieties of gneiss, but also the same subordinate beds, as occur in Scandinavia; also similar veins and masses of granite, containing many different minerals of the same species as those which were formerly considered as characteristic of the northern primitive region. Thus we find in the western part of the Böhmerwald, in the true primitive centre of Germany, the albite, triphane, petalite, tantalite; and in the eastern half of that chain, on the Moravian frontier, the red and green Norwegian garnet, the epidote of Arendal, and the same black augite and coccolite as in Scandinavia. Further, the malacolite of Pargas occurs in the limestone of Zitesch, and there also the well-known combination of garnet and idocrase. Lastly, the hornblende rocks of Weissemburg contain epidote and prehnite, those of Jamoliz harmotome, and of Marchendorf stilbite. The lepidolite of Rozena in Moravia occurs in a mass of granite enclosed in gneiss; and it is said the same locality affords also tin ore and white topaz.

4. *Whitestone.* This rock sometimes encloses masses of gneiss, and is frequently surrounded with gneiss, mica slate, and clay slate. It often contains embedded crystals of garnet and cyanite; less frequently of hornblende, mica, quartz, and copper pyrites. It generally rests upon gneiss, and is observed passing into that rock, and also into a kind of Neptunian granite. It is a more abundant rock in Germany than in any other country.

References to the Map of Germany.—East Part.

PRUSSIA.
1. Memel
2. Prokuls
3. Heidekrug
4. Winge
5. Gilge
6. Tilsit
7. Ragnit
8. Seszlacken
9. Mehlaucken
10. Tapiau
11. Labiau
12. Cranzkuhren
13. Fischhausen
14. Konigsberg
15. Brandenburg
16. Pillau
17. Heiligenbeil
18. Kreutzburg
19. Eylau
20. Allenburg
21. Insterburg
22. Gumbinnen
23. Stallupohnen
24. Darkehmen
25. Goldapp
26. Argenburg
27. Schipenbeil
28. Bartenstein
29. Heilsberg
30. Muhlhausen
31. Tolkomit
32. Elbing
33. Dantzic
34. Hela
35. Carthaus
36. Neustadt
37. Beborow
38. Lauenburg
39. Stolpe
40. Lupow
41. Rugenwalde
42. Zanow
43. Coslin
44. Belgrade
45. Baldenburg
46. Rummelsburg
47. Butow
48. Kossabude
49. Behrend
50. Schoneck
51. Stargardt
52. Mewe
53. Marienburg
54. Saalfeldt
55. Leibstadt
56. Guttstadt
57. Rossel
58. Rastenburg
59. Rhein
60. Lotzen
61. Oletzko
62. Lyck
63. Arys
64. Johannisburg
65. Sensburg
66. Allenstein
67. Passenheim
68. Ortelsburg
69. Willenburg
70. Niedenburg
71. Osterode
72. Lobau
73. Soldau
74. Gurzno
75. Neumark
76. Graudenz
77. Garnsee
78. Reisenberg
79. Marienwerder
80. Schwetz
81. Lindenburg
82. Tuchel
83. Konitz
84. Schlauchau
85. Landeck
86. Ratzebuhr
87. Neu Stettin
88. Barvalde
89. Labes
90. Schievelbien
91. Corlin
92. Colberg
93. Treptow
94. Greiffenberg
95. Naugardten
96. Massow
97. Stepenitz
98. Cammin
99. Wollin
100. Usedom
101. Uckermunde
102. Stettin
103. Brussow
104. Damm
105. Zachan
106. Jacobshayen
107. Dramburg
108. Callies
109. Det Crone
110. Tastrow
111. Flatow
112. Wirsitz
113. Vandsburg
114. Poln Crone
115. Culm
116. Strasburg
117. Gollup
118. Thorn
119. Forden
120. Bromberg
121. Inowraelaw
122. Szubin
123. Wongrowitz
124. Margonin
125. Schneidemuhl
126. Usez
127. Czarnikow
128. Fitchne
129. Driesen
130. Woldenburg
131. Soldin
132. Pyritz
133. Fiddichow
134. Konigsberg
135. Custrin
136. Frankfort
137. Reppen
138. Wietze
139. Landsberg
140. Zeilenzig
141. Meseritz
142. Birnbaum
143. Samter
144. Pinne
145. Posen
146. Rogasen
147. Gnesen
148. Mogilno
149. Kruswice
150. Wreschen
151. Szroda
152. Neustadt
153. Pieszew
154. Schrim
155. Moszym
156. Kosten
157. Gratz
158. Bomst
159. Zullichau
160. Grunberg
161. Grossen
162. Furstenberg
163. Luberose
164. Cottbase
165. Spremberg
166. Guben
167. Sorau
168. Priebus
169. Sagan
170. Neustœdtel
171. Polekwitz
172. Glogau
173. Fraustadt
174. Gahrau
175. Wintzig
176. Militsch
177. Rawicz
178. Kroben
179. Kozmin
180. Adelnau
181. Schildberg
182. Kreutzberg
183. Namslau
184. Oels
185. Breslau
186. Auzas
187. Neumark
188. Goldberg
189. Liegnitz
190. Haynau
191. Buntzlau
192. Rothenburg
193. Gorlitz
194. Lauban
195. Hirschberg
196. Landshut
197. Schweidnitz
198. Reichenbach
199. Zobten
200. Strehlen
201. Brieg
202. Oppeln
203. Guttentag
204. Great Strelitz
205. Tost
206. Gleiwitz
207. Pless
208. Sohrau
209. Ratibor
210. Lobschutz
211. Krappitz
212. Neusse
213. Munsterb
214. Glatz
215. Reinerz.

SAXONY.
1. Bautzen
2. Lobau
3. Zittau.

AUSTRIA.
1. Trautenau
2. Gitschin
3. Jung Buntzlau
4. Reichenberg
5. Bohm Leipa
6. Budin
7. Melnik
8. Schlan
9. Prague
10. Brandies
11. Nimburg
12. Bohmisch Brod
13. Koursim
14. Czaslau
15. Crudim
16. Chlumetz
17. Josephstadt
18. Konigingratz
19. Hohenmauth
20. Senftenberg
21. Alstadt
22. Friedberg
23. Jagerndorf
24. Freudenthal
25. Troppau
26. Teschen
27. Mistek
28. Leipnik
29. Olmutz
30. Littau
31. Zwittau
32. Leutomischel
33. Deutsch Brod
34. Kaczow
35. Kmin
36. Sedletz
37. Pisek
38. Nauhaus
39. Pilgram
40. Telsch
41. Iglau
42. Great Meseritsch
43. Trebitch
44. Budwitz
45. Eibenschiz
46. Lettowitz
47. Brunn
48. Austerlitz
49. Wischau
50. Hradisch
51. Prerau
52. Ung Brod
53. Goding
54. Auspitz
55. Feldsberg
56. Nicolsburg
57. Jazeldorf
58. Znaim
59. Hardeck
60. Allendsteig
61. Vittes
62. Zwettel
63. Gmund
64. Budweis
65. Krumau
66. Linz
67. Steyereck
68. Friestadt
69. Grein
70. Great Pochlarn
71. Durrenstein
72. Krems
73. Meissan
74. Kornenburg
75. Haimburg
76. Traiskirchen
77. Baden
78. Vienna
79. St. Polten
80. Stein
81. Ips
82. Ens
83. Steyer
84. Weyer
85. Altenmark
86. M. Zell
87. Glaknitz
88. Neustadt
89. Friedberg
90. Hartberg
91. Muzzuschlag
92. Kindberg
93. Bruck
94. Rottenmann
95. Murau
96. Knittelfeldt
97. Jadenburg
98. Frisach
99. S. Andre
100. Schwanberg
101. Voitsberg
102. Gratz
103. Furstenfeldt
104. Radkersburg
105. Friedau
106. Pettau
107. Ganowitz
108. Marburg
109. Wildon
110. Lavamunde
111. Bleyburg
112. Volkermarkt
113. Klagenfurt
114. Neumarkt
115. Grainburg
116. Laybach
117. Littau
118. Cilli
119. Ran
120. Landstrass
121. Neustadt
122. Gotschee
123. Zirknitz
124. Adelsberg
125. Vrem
126. Albona
127. Fiume
128. Novi
129. Verbovko
130. Motling
131. Carlsdadt
132. Jaszka.

Rivers in Prussia.
a Niemen
b Pregel
c Alle
d Passarge
e Drewenz
f Vistula
g Brake
h Kuddow
i Drage
j Netze
k Warta
l Obera
m Oder
n Neisse
o Bober
p Neisse.

Rivers in Germany.
q Elbe
r Moldau
s Iglo
t March
u Taja
v Danube
w Ens
x Mur
y Drave
z Save

Saxony, the southern Böhmerwald-gebirge, on the Austrian and Moravian frontiers; the Alps of Saltzburg, of Styria, and Lower Austria, contain deposits of this rock.

5. *Serpentine.* Some varieties of this rock occur embedded in limestone in Neptunian strata, and therefore these are probably of aquatic origin.

II. *Transition rocks. Neptunian.* These are clay-slate, with quartzo-talcy or micaceous rocks, and older greywacke; newer greywacke, with newer clay slate; transition limestone, flinty slate or Lydian stone, whet slate, anthracite. 1. The older greywacke and the talcy rocks connect the transition and primitive deposits with the newer greywacke and clay slate, the transition and secondary rocks. 2. The newer or true greywacke and its clay slate sometimes contain organic remains, as in the Hartz, Bohemia, Rhine district, &c. The fossils from the animal kingdom are generally casts, or they are changed into limestone or brown ironstone. The most frequent are trilobites, or fragments of encrinites and madreporites: fossil bivalve shells also occur, such as terebratulites, ammonites, orthoceratites, &c. Some plants are likewise met with, and are generally calamites.

The limestone occurs in interrupted beds, thus exhibiting the same mode of distribution as in the primitive deposits.

3. *Limestone of the talcy quartz rocks.* This in general aspect approaches more nearly to the primitive limestone than any of the others of the transition class. Many of the beautiful brecciated marbles of commerce belong to this part of the geological arrangement. Limestone of the true greywacke is more compact than the former, and also differs from it in frequently containing fossil organic remains, viz. trilobites, calymenites, asaphites, orthoceratites, madreporites, &c. Many of these limestones, when cut, have a beautiful appearance, and are highly valued as marbles. Caves, containing remains of extinct animals, occur in the limestone.

4. *Flinty slate* and *Lydian stone.* These minerals occur in beds in the greywacke and clay slate. It is remarked that the greywacke and clay slates, in districts where the beds of flinty slate occur, are sometimes highly impregnated with silica, a fact intimately connected with the mode of formation of all these rocks.

5. *Whet slate* or *whetstone.* This slate, so well known in the arts, occurs in small beds in some districts in the clay slate.

6. *Anthracite* or *glance coal.* Beds of this coal occur in the Hartz, Westphalia, and Bohemia.

Plutonian primitive and transition rocks.—Granite. Those great bodies of granites, which are intermixed with the Neptunian primitive strata at their junction, and which also send out branches or arms among those strata, may be considered as of primitive formation; while the granites, which are confined to transition rocks, and affect them in the same manner as the primitive does the primitive strata, may be viewed as belonging to the transition class. The Alps, Riesengebirge, the Erzgebirge, the Böhmerwald-gebirge, the Hartzgebirge, afford examples of these granites.

Syenite. This rock in general is said, in Germany, to be newer than many even of the transition rocks. It may be well studied in Moravia, where it abounds. The trap rocks connected with the syenite belong to the same epoch of formation.

III. *Secondary rocks. Neptunian.* The old red sandstone and mountain limestone, the oldest members of the secondary class, are comparatively less frequent and abundant in Germany than in Britain and Ireland. The coal formation occurs in Silesia, Westphalia, Saxony, Bohemia, Moravia, and in other quarters; but in insignificant deposits, when contrasted with its extraordinary abundance in Britain. The most extensive coal-fields are those in Silesia. In many places, as Halle, Zwickau, Thrandt, Forest of Thuringia, and also in Silesia, the coal formation is more or less completely covered with that red sandstone known under the name rothliegende.

The secondary formations that succeed the coal deposit may next be noticed.

Magnesian limestone, or *zechstein.* This formation was at one time believed to form a principal part of the great limestone range of the Alps; hence was named Alpine limestone: the truth, however, is, that it occurs in but small quantity in the Alps, the limestone of that range belonging to a newer formation. It is of comparatively small extent, and its colours are gray, brown, yellow, and black. The fossil organic remains which most particularly characterise it are fishes of various kinds, and particular kinds of amphibia. Fossil crabs of the trilobite tribe, and the productus longispinus of Sowerby, occur in it. Terebratulites and encrinites, particularly the E. ramosus and T. alatus, cristatus, lacunosus, and sufflatus. Impressions of flustra also occur, and fossil mytili and tellinæ. Fossil fruits, and impressions of sea and land plants, add to the variety of organic remains in the formation. It occurs in the Hartz, Hessia, Hanau, Thuringerwald, Schmalkalden, Frankenberg, &c.

New red sandstone. This vast deposit is divided in Germany into three great systems; an inferior and superior red sandstone, each abounding in variegated marls, the one separated from the other by a great limestone formation called the shell limestone, or muschel kalk. The lowest system of variegated limestone contains a good many interesting fossil plants, chiefly coniferæ and ferns; also bivalve and univalve shells, approaching very nearly in char-

acter to those of the shell limestone and upper formations, but, as well as the plants, differing essentially from any fossils of the magnesian limestone and lower formations. It frequently contains salt and gypsum.

Shell limestone. This formation is seen in Wirtemberg, Bavaria, Gotha, and Hanover, resting upon the variegated sandstone, and capped by keuper. All the salt-mines in the kingdom of Wirtemberg occur in it. Jäger found in it fossil remains of several remarkable extinct amphibious animals: these are plesiosaurus, ichthyosaurus, and an unknown reptile; and the jaws and teeth of a crocodile, plates of a turtle, many parts of fishes of new genera, &c.

Keuper. This formation of green, red, and purple sandstones and marls, is seen on a splendid scale at Stutgard, where it rests upon shell limestone, and is covered with lias. Calamites, and equisetaceous plants, resembling those of the lias and oolite of England, and also two new species of saurians (cylindricodon and cubicodon of Jäger) are found in it.

Lias. The lias, marls and gryphite limestone, with many identical English fossils, are seen in Wirtemberg, the north of Bavaria, Hanover, Westphalia, &c. Six new species of ichthyosaurus, five of which are known in England; six or seven genera of fishes, two species of crustacea; eleven species of ammonites; twelve species of belemnites, scaphites, nautili and numerous other shells common to the English lias, are found at Banz near Coburg, on the right bank of the Mayn. The pentacrinites briareus of the English lias is common; besides several species of corals hitherto unobserved in the lias of England.

Inferior oolite. This is a great arenaceous deposit, generally highly ferruginous. In the gorge called the Porta Westphalica, by which the Weser escapes into the plains of Minden, there is a fine display of all the shales, sandstones, beds of oolite, &c., of which the inferior oolite is composed. It contains many characteristic British fossils, and in many places throughout Wirtemberg, Bavaria, Hanover, Westphalia, Franconia, &c., it caps the lias. The ferruginous sandstones of this formation are readily distinguished from those of the lias both by superposition and fossils.

Middle oolite, Jura limestone. The mineralogical characters of the middle oolite of central and southern Germany are essentially different from those rocks of the same age in Westphalia and Hanover; so that, instead of the shales, sandstones, &c. just described, they consist in one part of compact cream-coloured limestone, and in another of dolomite. In Franconia, so remarkable on account of the number of bears' caves in the hills opposite Banz, and in many other places, the dolomite usually caps the limestone, the latter containing the greater number of fossils. In these groups, and in the inferior oolite, there are many species of ammonite, and about sixty species of scyphia from the middle Jura limestone, and also many corals. At Solenhofen there are several quarries of a slaty or rather tabular compact limestone, which is valued as a lithographic stone. This Solenhof stone appears to be the equivalent to the Stonesfield slate of England, forming the uppermost part of the oolite formation in Germany, lying consequently immediately below the green sand. The higher members of the oolite group of England, viz. coral rag, Portland stone, &c. have not hitherto been met with in central Germany, though they may exist in Hanover.

Green sand. This formation, wherever it occurs in Germany, is generally divisible, as in England, into lower or quartzy limestone, and upper or chalky sandstone; the former known in many districts as the *quader sandstein*, the latter as the *planer kalk*. Fine displays of these two rocks occur in southern Hanover and the northern flank of the Hartz, where the lower sandstone is sometimes a highly ferruginous rock; at other times, a white sandstone, in which character it ranges from the northern flank of the Hartz into Saxony and Bohemia. In Westphalia the green sand deposit is said to approach still nearer in characters to the English group.

Chalk. This deposit, the newest of the secondary series, occurs in various localities in the great plain of northern Germany, in some points in the interior of the country; and deposits high in the Alps, with chalk fossils, as they have been called, are by many geologists maintained to be portions of the chalk formation, borne aloft during the upraising of these mountains.

IV. *Tertiary rocks. Neptunian.* These rocks are considered as distributed in five great *basins*, the limits of which are thus designated:—

1. Basin of Northern Germany, bounded in some measure by the following towns:—Hanover, Wolfenbuttel, Magdeburg, Cothen, Halle, Merseburg, Zeiz, Gremma, Grossenhayn, Bunzlau, Strehlen, Niesse, Loislau, and Proskau; and extends further into Poland and Russia. Towards the north it terminates on the North Sea and the Baltic.

2. Bohemian Basin, bounded by the mountains that lie around Bohemia, as a great circular valley.

3. Basin of the Rhine.

4. Bavarian and Upper Austrian basin, including the tertiary plain of Swabia, Bavaria, and Upper Austria.

5. Basin of Lower Austria and Hungary, including the flat county of Lower Austria, and the great plains of Hungary.—These five basins or hollows, now filled with marine and lacustrine deposits, were formerly great inland seas, situated at different heights.

Plutonian secondary and tertiary rocks. These are porphyries and traps of various kinds, which have been sent from below at different periods during the formation of the secondary deposits, and also in part so late as the formation of the tertiary rocks. Fulda, Saxon Erzgebirge, Hessia, and Bohemia, are rich in trap rocks. *Old volcanic rocks* also occur in different parts of Germany, especially in the neighbourhood of the Rhine.

V. *Alluvial deposits.* These occupy great tracts of country, especially in the northern part of Germany.

SUBJECT. 2.—*Botany of Germany, the Netherlands, and Poland.*

These are countries, which, however interesting in themselves, do not afford any character so peculiarly striking in their vegetation as to render it necessary to dwell upon it here. As may be expected from their situation, the southern plants of the country, bordering upon the Gulf of Venice, partake of the nature of the Italian productions and the adjacent shores of the Adriatic. The midland parts yield a flora very similar to that of the middle and north of France; the mountains to that of Switzerland; while the northern parts bear a considerable affinity to England. Hungary includes mountains exhibiting a highly beautiful vegetation, and which has given rise to the splendid *Flora Hungarica* of Waldstein and Kitaibel; but the plants are more interesting to the botanist than to the general reader, and partake of an alpine character.

SUBJECT. 3.—*Zoology.*

The zoology of Germany is commensurate in importance with the wide extent of territory generally included under that name, and to the diversified nature of its surface. The lofty mountains and vast forests of Hungary, Bohemia, Poland, &c., give shelter to a much larger proportion of the native European quadrupeds, than is to be found, perhaps, in any other part of the Continent. The celebrated wild oxen of antiquity, the Bos Urus, if we may trust the zoological knowledge of travellers, appear to have existed in the Carpathian forests within the last century, but it has long been extinct both there and in Lithuania. Bears, in former times, were very numerous, and are still asserted to be occasionally met with. The Wild Boar is not uncommon, and Wolves still less so; but the Chamois (*fig.* 414.), once common in Carniola and the Carpathian chain, is now rarely seen. This remarkable animal inhabits the wildest and most abrupt precipices, but does not ascend to those elevated heights which the Ibex alone delights to visit: it runs with rapidity along the most perpendicular ledges, springing across precipices, and bounding from rock to rock, with a steadiness and security truly wonderful. If pursued by the hunter beyond the means of retreat, it is said to pitch itself headlong downward upon its enemy, and dash him into the abyss below. Notwithstanding the wild nature of the Chamois, it has been sometimes known to mix with the domestic cattle and goats, and to be partially tameable.

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Chamois.

Some of the most formidable birds of prey belong to this part of Europe. The great cinereous Vulture (*fig.* 415.) (*Vultur cinereus* Lin.) is principally found on the lofty mountains of Hungary: it measures three feet six inches in length, and preys only upon dead animals; while the Imperial or Golden Eagle, plentiful in the forests, will devour its prey only when captured by itself. The Ringtail Eagle, scarcely inferior in size, is likewise met with. To these might be added numerous smaller species, uninteresting to the general reader. The great Black Woodpecker should not, however, be omitted, as being the largest of its genus known in Europe; nor is the rare *Picus canus*, or Grey Woodpecker, an uncommon inhabitant of the German forests.

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Vulture.

The most extraordinary reptile of Europe is the *Proteus anguinus*, an animal resembling a water-lizard, found in the celebrated lake Zirknitz, in Carniola. Naturalists were long divided in opinion, whether to consider it as a perfect animal, or the larva (or tadpole) of some other; but this latter supposition has since proved to be erroneous. It is, says Dr. Shaw, about twelve inches long, of a pale flesh colour, and somewhat eel-shaped; on each side of the breast are three branchial fins, or breathing organs, of a bright red colour: its eyes are stated to be remarkably small, and seated beneath the skin.

The domesticated animals of Germany do not appear to have received that attention in their improvement which they require. The horses have never been in any great request, yet the breeds appear, to a certain extent, to have been ameliorated within the last hundred years. Most of the German princes have excellent horses in their studs; and their stallions are generally chosen from those of Arabia, Barbary, and Spain: from such sources

greater results might have been expected. Yet the chief objection made to the German horses is that of being rather short-winded. (*Ham. Smith.*) The common breed of oxen have small or middle-sized horns; but the different polled races, or hornless cattle, now spread over Europe and part of America, would appear to have originated in Germany. The breeds of sheep are stated to be improving; those of Saxony and Bohemia, in particular, now furnish wool of a very superior quality.

Sect. III.—*Historical Geography.*

Ancient, or, as it was called, Great, Germany was known to the Romans, but not conquered by them. While the equally distant countries of France and Spain, and the remote island of Britain, were regularly incorporated into that vast empire, the ancient Germans never sacrificed any portion of their proud independence. They are described as having been the rudest, the fiercest, and the bravest of all the tribes of the barbarians. The country was almost entirely covered with vast forests, of which that called the Hercynian extended from the Rhine to the Vistula. Its surface is described by Tacitus and Cæsar as divided among a number of small nations, poor, hardy, and brave, scantily cultivating the ground, and despising all the arts of civilized life, led by their chiefs in war, but scarcely owning their authority in peace, and determining all things by a general assembly of the nation. Cæsar, Germanicus, Drusus, and other great captains, derived glory from their victories over the Germans, and penetrated even a considerable depth into their wilds; but the Romans never were able to form any permanent establishment, and considered themselves fortunate if they could preserve inviolate the boundary of the Rhine and the Danube.

In the fifth century, the nations of Germany burst these barriers, and overwhelmed the sinking empire of the West. The Saxons over-ran Britain; the Franks, Heruli, and Burgundians seized different parts of France; the Lombards established themselves in Italy; the Vandals and Goths penetrated into Spain and Africa. But while German nations thus swayed all the western kingdoms, they owned no dependence upon their original country, which remained in exactly the same state as before she sent forth these numerous bands of conquerors.

Under the reign of Charlemagne, Germany first felt the weight of conquest, though only by the arms of her own children. That great monarch spent nearly his whole life in quelling the continual rebellions of the Saxons; but he succeeded in placing on his head the imperial crown, which conferred dominion over France, Germany, and Italy. Under the weak and divided sway of his posterity, this great dominion fell gradually to pieces; but the name and character of an empire remained attached to Germany; and the German emperors always considered themselves as successors of Charlemagne.

The division of the empire into feudal states took place gradually, as the central power became weaker, and the dukes, landgraves, and other nobles were emboldened to shake off the yoke. At length they carried the spirit of independence to a higher pitch than in any other of the western kingdoms, rendering the empire itself elective. Nine of the great princes temporal and spiritual,—the king of Bohemia; the dukes of Bavaria, Saxony, Brandenburg, and Hanover; the Palatine of the Rhine; the Bishops of Mentz, Trèves, and Cologne,—exercised this power, and assumed the title of electors. The empire thus passed successively into the houses of Saxony, Franconia, Bavaria, and Austria.

The rise of the house of Austria, in the thirteenth century, under Rodolph of Hapsburg, forms a memorable era; that house having ever since (except during a short interval) retained the succession to the empire, though always with a form of election. Its power, however, has rested much more upon its actual possessions, and the warlike character of its subjects, than upon any jurisdiction which its sovereigns have possessed as emperors.

The Reformation formed a remarkable era in the history of Germany. Originating in that empire, it was soon embraced by a great proportion of the leading states, and was accompanied, as usual, with bold and sometimes republican opinions on the subject of government. The emperors put forth their whole strength in endeavouring to crush it by force of arms, and at the same time sought to establish their paramount dominion over all Germany. The perseverance of the Protestant confederacy, and the glorious victories of Gustavus Adolphus in the thirty years' war, not only established freedom of worship, but emancipated the smaller states from the authority of the emperor, and rendered his supremacy over the Germanic body little more than an empty name.

The rise of Prussia, in the middle of the eighteenth century, caused a considerable change in the political aspect of Germany. Amid all the independent states, Austria had alone ranked as one of the first magnitude, and had thus maintained a paramount influence. Prussia, however, having wrested from her Silesia, and obtained accessions in other quarters, was enabled to treat with her on equal terms; and though Austria continued still a great state, her power over the Germanic body was almost annihilated.

The French revolutionary war caused a mighty movement. The whole western part of the empire was new-modelled, under the title of the Confederation of the Rhine; and Prussia and Austria became little more than vassal states. A mighty reaction, however, ensued

France was driven completely within her former boundaries, and Germany, with some modifications, was replaced in the same situation as at the commencement of this terrible contest. An attempt has even been made to revive the powers of the Germanic diet: these have been chiefly employed by the great states in dictating, to those of inferior note, measures regarding the defence of the empire, and the regulation of the press and the universities.

SECT. IV.—*Political Geography.*

The political system of Germany is particularly complicated, chiefly through the great number and variety of the states of which it consists, partly also through the common bond of union which is attempted to be maintained among them. It will therefore be requisite to consider, first, the Germanic body, as represented in the Diet, which is entitled to exercise certain general functions; and, next, the political form, power, and relations of the particular states.

SUBSECT. 1.—*Germanic Body.*

The Diet has for its office to preserve the external and internal security of Germany, as well as the independence and safety of its particular states. It professes to regulate all the foreign relations of the empire, and the disputes which may arise between one state and another, without interfering with the interior administration of any.

The Diet consists of deputies from each particular state. The number of votes possessed by each varies, according to its extent and power, though not in any exact or uniform proportion. In the full meeting the aggregate number of votes is seventy, which are thus distributed:—Austria, Prussia, Saxony, Bavaria, Hanover, and Wirtemberg, have each *four*; Baden, Hesse-Cassel, Hesse-Darmstadt, Holstein, Luxemburg, each *three*; Brunswick, Mecklenburg-Schwerin, Nassau, each *two*; all the rest, Saxe-Weimar, Saxe-Coburg, Saxe-Meiningen, Mecklenburg-Strelitz, Holstein-Oldenburg, Anhalt-Dessau, Anhalt-Bernburg, Anhalt-Cothen, Schwartzenburg-Sondershausen, Schwartzenburg-Rudolstadt, Hohenzollern-Hechingen, Liechtenstein, Hohenzollern-Sigmaringen, Waldeck, Reuss-Schleitz and Reuss-Greitz, Lippe-Schauenburg, Lippe-Detmold, Hesse-Homburg, Lubeck, Frankfort, Bremen, Hamburg, have each only *one*. Several of these belong to foreign sovereigns, who have a vote in virtue of territories which they hold in Germany, and are subject to the Diet in matters relating to those territories; as the king of Great Britain for Hanover, the king of Holland for Luxemburg, the king of Denmark for Holstein. The full assembly of the Diet resolves itself into a smaller assembly or committee of seventeen, in which only the great powers have each a vote, and the other votes are respectivley assigned to two, three, or four of the smaller powers united. This committee prepares all the business of the full Diet, and puts it in a form to be voted upon. The sittings of the Diet are perpetual, though, when all their business is disposed of, they may allow themselves a vacation of not more than four months.

The emperor of Austria no longer claims his ancient prerogatives as emperor of Germany, of which title he was divested by Napoleon; he professes himself only *primus inter pares*; but he is president of the Diet, and submits to it the subjects on which it is to deliberate. He cannot, however, withhold propositions made by any other members, but must bring them forward in proper time and place. He has also a casting vote in the committee. There being no longer an emperor, the functions of the nine electors have ceased.

[The following table gives a general view of the Germanic confederacy, in 1833:—

States.	Area in Sq. Miles.	Population.	States.	Area in Sq. Miles.	Population.
Austria	78,912	11,645,000	Anhalt-Dessau	363	60,000
Prussia	70,549	10,010,755	Anhalt-Bernburg	340	40,000
Bavaria	30,997	4,037,017	Anhalt-Cothen	331	36,000
Saxony	7,900	1,497,568	Schwartzenburg-Sondershausen	394	51,767
Hanover	14,720	1,549,000	Schwartzenburg-Rudolstadt	448	60,000
Wirtemberg	7,500	1,568,033	Hohenzollern-Hechingen	117	15,500
Baden	5,800	1,201,309	Hohenzollern-Sigmaringen	498	39,000
Hesse-Cassel	4,352	649,800	Liechtenstein	53	5,550
Hesse-Darmstadt	3,600	720,000	Reuss-Greitz	153	25,000
Holstein	3,691	410,385	Reuss-Schleitz	453	58,500
Luxemburg	2,347	305,190	Lippe-Detmold	436	77,500
Saxe-Weimar	1,408	232,704	Lippe-Schauenburg	213	25,500
Saxe-Coburg-Gotha	1,094	156,639	Waldeck	459	56,000
Saxe-Altenburg	491	114,048	Hesse-Homburg	138	23,000
Saxe-Meiningen-Hilburghausen	875	129,588	Frankfort	113	55,000
Brunswick	1,514	250,100	Lubeck	122	47,000
Mecklenburg-Schwerin	4,755	450,200	Bremen	78	49,000
Mecklenburg-Strelitz	768	84,130	Hamburg	134	154,000
Holstein-Oldenburg	2,753	251,300	Kniphausen	17	2,860
Nassau	2,164	355,815		251,412	36,493,879

AM. ED.]

SUBSECT. 2.—*The Austrian Empire.*

The empire of Austria is not only the first power in Germany, but by its possessions, both within and without, it has long ranked among the foremost states in the general system of Europe. By the last war, indeed, it lost the Netherlands, a rich and important territory,

though too much detached from the rest. But by means, lawful or unlawful, it obtained accessions which were nearly an equivalent; and its possessions are now formed into a vast, connected dominion in the centre of Europe. In Germany, they comprise Upper and Lower Austria, Bohemia, Moravia, with the Alpine regions of Styria, Carinthia, and the Tyrol; in Poland several provinces, which have been wrested by successive partitions, and to which it gives the name of Gallicia; the entire kingdom of Hungary; and, in Italy, Venice, Milan, Mantua, and other territories, which have been united under the name of the Lombardo-Venetian kingdom. The German territories, with Hungary, are known under the appellation of "the Hereditary States." The Austrian monarchy is bounded on the east by those of Turkey and Russia; on the north by those of Prussia and Saxony; on the west chiefly by Bavaria, Switzerland, and Piedmont; on the south by Tuscany and the Ecclesiastical States. The whole territory amounts to 258,000 square miles.

The following is Professor Bohrer's estimate of the extent and population in 1826, to which we add the population in 1829, according to Col. Traux:—

	Square German Miles.	Cities.	Towns.	Villages.	Houses.	Population.	
						1826.	1829.
Lombardy	851.94	48	281	5,401	542,543	4,237,301	4,279,764
Dalmatia	273.75	9	14	988	49,175	323,112	329,727
Tyrol	516.41	21	32	1,558	96,689	789,835	776,300
Illyria	519.74	54	57	6,848	167,012	1,121,240	1,138,506
Styria	399.40	20	96	3,539	163,050	824,505	839,128
Austria	708.65	52	352	11,126	274,997	2,008,970	2,031,136
Bohemia	952.95	286	975	11,924	541,074	3,698,506	3,748,361
Moravia	481.56	119	178	3,673	288,905	1,968,713	1,994,850
Gallicia	1,548.03	95	194	6,042	633,709	4,293,488	4,385,608
Hungary	4,181.60	62	644	11,695	1,096,007	9,471,263	9,639,686
Transylvania	1,100,80	13	64	9,566	256,629	2,000,015	2,027,566
Military Frontier	609.70	12	13	715	89,669	907,453	923,315
	12,144.53	785	2900	73,075	4,131,959	31,664,401	32,134,037

According to Cannabich, the population (1825) is composed of Sclavonians 14,200,000; Magyars or Hungarians 4,900,000; Germans 6,300,000; Italians 4,400,000; Wallachians 1,300,000; Jews 450,000, with Gipsies (Zigeuner), Greeks and Armenians.—In regard to religion, according to the same author, there are about 24,000,000 Roman Catholics; 2,800,000 Greek Catholics; 1,500,000 Greek Church; 2,700,000 Calvinists and Lutherans; 450,000 Jews; 50,000 Unitarians, &c. If we except the mountain borders, the whole empire enjoys the happiest climate, and is fitted to produce corn, wine, silk, and other valuable articles in the highest perfection. Except, however, Lombardy, part of Bohemia and Silesia, and the Alpine tracts, cultivation is nowhere carried to the height of which it is susceptible. This seems owing partly to the proud indolence of the Austrian and Hungarian population; partly to the obstructions which stand in the way of foreign commerce; for there is no sea-coast unless at the head of the Adriatic; and the great rivers which roll through the territory, have afterwards a long course through that of foreign and partly semi-barbarous states, before they reach the sea.

For the same reasons, none of the Austrian dominions are manufacturing countries, though in all those north of the Alps linen is fabricated to a great extent. But the mineral riches of the Austrian dominions are equal or superior to those of any other country in Europe. The salt mines of Poland are the most extensive in the world; the others rank as to importance in the following order: iron, copper, silver, gold, cinnabar, quicksilver, lead, tin.

The government of Austria is an hereditary monarchy, almost entirely absolute. Originally the monarch enjoyed the title of emperor only when elected as head of the Germanic body; and his hereditary titles were archduke of Austria, king of Hungary and Bohemia. But when Bonaparte compelled Francis II. to resign the title of emperor of Germany, he assumed in its stead that of emperor of Austria.

There are assemblies called States in all the countries subject to Austria, except Friuli and the Military Frontiers. But in general they impose no check on the prerogative of the monarch; and their assemblage is only for form's sake, or for giving assistance in some secondary branches of administration. In Hungary and Transylvania, however, the states have a share in the making of laws, and possess other important prerogatives; and in the Tyrol, no new tax can be imposed without their consent. Hungary and the Tyrol, accordingly, though the most troublesome in peace, have in war proved always the bulwarks of the Austrian monarchy. The Hungarian government, however, is entirely aristocratical, the body of the peasants being in a state approaching to personal bondage. This was the case also in Austria and Gallicia till 1781, when slavery was abolished by Joseph II. The states consist of four orders, clergy, nobles, knights, and representatives of the free cities. In the Tyrol alone there is a house of peasants.

Justice is administered in Austria according to recent codes, which were formed by Joseph II. in 1786–7, and by Francis II. in 1811–12. The tribunals of the first resort are conducted, not by salaried judges, but by the magistrates of towns; and in the country by courts composed of the privileged nobility of the district. From them an appeal lies to colleges of justice established in the capital of each province.

The finances of Austria are involved in considerable obscurity, as no official statements on the subject are ever made public. In 1819, Hassel calculated the entire income at 125,000,000 florins, about 63,000,000 dollars. Of this the proportion was from Upper Austria, 19,800,000 florins; Lower Austria, 5,200,000; Saltzburg, 800,000; Styria, 6,000,000; Carinthia, 2,500,000; Carniola, 2,200,000; Littorale, 2,000,000; Tyrol, 4,500,000; Bohemia, 19,500,000; Moravia and Silesia, 8,000,000; Gallicia, 10,000,000; Hungary, 20,000,000; Transylvania, 5,500,000; the military limits, 500,000; Dalmatia, 500,000; Lombardy, 9,000,000; Venice, 9,000,000. This revenue arises, 1. from land-tax, which, for the whole empire, may amount to about 41,000,000 florins. 2. The customs, duties on commodities, stamps, and lottery, not reckoned at more than 30,000,000. 3. The royal monopolies; a copious source, which yields at present not less than 36,000,000. 4. The imperial domains, the value of which is estimated at 300,000,000, but the net revenue arising from them at not more than 7,000,000 or 8,000,000. There are also particular domains in Hungary and Transylvania, which yield about 2,000,000 more. The expenditure is involved in still greater uncertainty. The military disbursements are undoubtedly on a more extensive scale than the revenue can well support, though Hassel rejects as extravagant Lichtenstein's estimate of 140,000,000. The expenses of the court and civil establishments are estimated at 54,000,000, besides which there are the private expenses of the monarch, regulated entirely according to his pleasure.

The Austrian military establishment consisted, in 1819, of 270,000 men; 185,400 infantry, 38,400 cavalry, 17,800 artillery, 2350 engineers; of pioneers, invalids, the transport service, &c., 20,600. These are augmented in war by the militia called the *landwehr;* which in 1811 were, for Bohemia, 21,590; Moravia and Silesia, 11,770; Austrian circles, 10,000; Styria and Clagenfurt, 6650: and Gallicia, 21,500: making in all, 71,510; but the amount is now supposed to have reached 100,000. Besides these, there is the Hungarian levy, called often the *insurrection* levy, led by the nobles, who in the seven years' war replaced Maria Theresa on the throne, and who in the last war repeatedly came forward in great force. In 1797 they mustered 35,000 foot and 18,000 horse. Austria has an excellent body of cavalry, both of heavy dragoons for charging in the field, and of light irregular bands of Croats, Pandours, and other tribes from the military frontier. Her infantry is also respectable: there is something inert, however, both in her councils and movements, which has usually made her unfortunate in her wars, both with France and Prussia; yet she has always recruited her strength with surprising rapidity from the resources of her warlike population.

Though a maritime force is ill suited to the situation of Austria, yet she has formed a small navy at Venice, consisting of three ships of the line, two frigates, and twenty-four sloops; and she maintains an armed flotilla on the Danube.

SUBSECT. 3.—*Kingdom of Prussia.*

The kingdom of Prussia, which at the beginning of the last century had neither name nor place among the states of Europe, has by rapid advances become one of its most powerful monarchies. The basis was formed by the territory of Brandenburg, the ruler of which ranked as elector, and was one of the chief of the second-rate princes of the empire. About the beginning of the seventeenth century the elector acquired the Grand Duchy of Prussia, a territory held for some time by the knights of the Teutonic order, who being unsuccessful against the Turks in Palestine, turned their efforts to the conversion and conquest of the northern borders of Europe. The united state, however, did not make any great figure till the beginning of the eighteenth century, when Frederick I. not only assumed the title of king, but spent his life in forming an army, and raising its discipline to the highest pitch. This army devolved on the great Frederick, whose daring and enterprising spirit was not long of employing it in the extension of the monarchy. From the house of Austria he wrested Silesia, one of the finest of its provinces. By the partition of Poland, an iniquitous proceeding, in which he took the lead, he not only extended, but connected together, many of his scattered possessions. In 1806, the battle of Jena seemed to have for ever laid prostrate the monarchy of Prussia; but the disastrous campaign of the French in Russia, and subsequently the patriotic and universal rising of the people, completely expelled the usurping power, and re-established the kingdom in its ancient rights and possessions.

The parts of the Prussian monarchy are so various and detached, that it is difficult to connect them under any general view. In Germany, she has the entire territory of Brandenburg, of Silesia, except a corner left to Austria, and of Pomerania, of which Sweden is now entirely stripped. Her Saxon possessions consist of Magdeburg, Merseburg, and Erfurt. In Westphalia, she has Minden, Munster, and Arensburg; on the Rhine, Dusseldorf, Cologne, Clèves, Coblentz, and Treves. Beyond Germany, she has the original duchies of East and

West Prussia, from which she takes her name. In Switzerland, she has the principality of Neufchâtel. In Poland, she has only the province of Posen; for Russia, in reward of her own services, has chosen to appropriate that of Warsaw. These foreign possessions, with the eastern German territories, form nearly a connected kingdom, which comprises the main body of the Prussian monarchy. The Westphalian and Rhenish provinces form a detached western portion, separated from the rest by the dominions of Hanover, Hesse, and Saxony.

The following is a statement of the extent of the different parts of the Prussian monarchy, with its population, in 1827:—

Provinces.		German Square Miles.	Population.
Prussia	Königsberg	404.93	702,100
	Gumbinnen	207.87	408,440
	Dantzig	150.80	325,868
	Marienwerder	315.06	446,709
Posen	Posen	327.43	720,112
	Bromberg	211.07	331,025
Pomerania	Stettin	233.13	409,992
	Koeslin	258.49	312,710
	Stralsund	74.89	147,356
Brandenburg	Berlin and Potsdam	377.27	855,670
	Frankfort	371.53	661,333
Silesia	Breslau	179.73	935,194
	Oppeln	238.43	679,601
	Reichenbach*	120.46	
	Liegnitz	188.40	751,154
Saxony	Magdeburg	204.70	539,807
	Merseburg	187.01	581,059
	Erfurt	66.93	975,374
Westphalia	Munster	128.63	388,898
	Minden	94.73	392,108
	Arensberg	143.70	439,706
Rhine	Cologne	61.77	377,451
	Dusseldorf	95.66	675,352
	Coblentz	92.58	409,204
	Trèves	126.87	361,729
	Aix la Chapelle	66.55	344,317
	Neufchâtel	13.95	52,800
		4,934.87	12,605,078†

The productions of this large territory are as various as its constituent parts. According to Hoffmann, the total area is 107,765,000 Magdeburg acres. Of these, 42,767,000 are arable; 432,000 garden ground; 54,000 vineyard; 20,436,000 pasturage; 25,754,000 woods; 18,322,000 rock, water, and waste. The annual revenue derived from it is calculated as follows: arable, 50,656,000 rix-dollars; pasturage, 19,652,000; woods, 6,500,000; gardens, 2,782,000; wines, 300,000; fishery, 749,000; hunting, 745,000; in all, 81,304,000 rix-dollars. The capital value is estimated at 2,032,600,000 rix-dollars. Prussia is not, on the whole, a manufacturing country, though the linens of Silesia are highly distinguished: its woollen manufacture is also extensive, and Berlin has some fine fabrics of glass and porcelain. In 1805, the whole manufactures of Prussia were valued at 84,790,000 rix-dollars, which were supposed to give employment to 350,000 persons.

The constitution of Prussia has been long that of a pure military monarchy. The old states of ducal Prussia, Silesia, Pomerania, and other districts, had been entirely discontinued; and even the privileges of the order of nobles, which had been great, were merged in those of the crown. When, however, the king of Prussia called upon his subjects to take arms against France, he came under a solemn obligation to reward them with a free constitution. Replaced on the throne by the valour of his people, he suffered a series of years to elapse, without taking any steps towards the fulfilment of this engagement. Within the last few years, however, the promise has in a certain shape been executed. Separate provincial states have been convoked for the different members of the kingdom, Prussia, Brandenburg, Pomerania, Silesia, Saxony, Westphalia, and the Rhenish provinces. Their jurisdiction, however, is confined within very narrow limits. They cannot originate any project of law, but must merely deliberate on those submitted to them by the king. Their debates are secret. No change, however, can henceforward be made in the law, and no new tax imposed, without their sanction. In other respects the king has zealously supported the measures brought forward by Austria for the suppression of popular influence, and limiting the liberty of the press.

The taxation of Prussia is large in proportion to its population, owing in a great measure to the supposed necessity of maintaining an army sufficient to cope with neighbours of more extended dominion. The entire revenue in 1816 amounted to 76,000,000 florins (7,980,000*l.*). Of these, East Prussia produced 8,100,000; West Prussia, 3,750,000; Posen, 3,100,000; Brandenburg, 9,000,000; Pomerania, 3,000,000; Silesia, 13,500,000; Saxony, 10,417,000; Westphalia, 8,431,000; the Rhine, 15,670,000. In 1829, the receipts were stated at 50,796,000 rix-dollars (about 8,889,000*l.*). The following were the chief sources:—Do-

†The population is estimated to have risen, in 1838, to 13,842,000. *Lately merged into the other Silesian districts.

mains and forests, 5,524,000; mines, 1,000,000; posts, 1,100,000; lottery, 684,000; monopoly of salt, 4,783,000; land-tax, 9,657,000; income tax, 6,368,000; licenses, 1,736,000; customs and excise, 18,733,000.

The expenses come chiefly under the head of public debt, 10,937,000; pensions, 3,158,000; war, 22,165,000; foreign affairs, 586,000; the interior, 4,883,000; ecclesiastical and medical affairs, 2,347,000; justice, 1,823,000; provincial administrations, 1,830,000.

Prussia has contracted less debt than most modern states. Frederick the Great even left behind him a considerable treasure; but his successors incurred an amount of 60,000,000 or 70,000,000 of rix-dollars. This burden, Frederick-William III., by a strict economy, had in a great measure paid off, before the battle of Jena; but since that time the exigencies of the monarchy have caused the accumulation of a large funded debt, which, including the foreign loans, amounts to 160,000,000 rix-dollars (25,200,000*l.*), besides a floating sum of 18,000,000 or 20,000,000.

The Prussian army, its high discipline, and fine condition, have been always the pride of the monarchy: and notwithstanding the blow it received on the fatal field of Jena, its glories in no long time, under Blücher, were completely revived. The army, as formed by Frederick I., was distinguished chiefly for that rigid discipline which reduced the soldier almost to the level of a machine moved at the will of his officer. This system became the object of imitation to the other states; but the victories of the French showed that greater things might be done by a more active and intelligent soldiery. The Prussian force consists of three parts; the standing army, the *landwehr*, and the *landsturm*. The former is composed of 141,043 men, of which 17,908 are guards; 82,938 infantry; 19,647 cavalry; 13,500 artillery and engineers. They are recruited by conscription from the class of young men between twenty and twenty-five, who are all liable to be called upon for three years' service. We cannot but agree with Mr. Sherer, that "this universal soldiership is assuredly a curse," and that it would be much more eligible to have a certain number devoted for life to the army. The *landwehr* consists of those who have escaped the conscription, of those who have retired from the army, and of all others under forty years of age. They consist of two *bans;* the first comprises all who have not served, or are under thirty; the second, those who have retired from the line, or who are under forty. They are employed constantly in war; but in peace only during a part of the year, when they are called out to be trained. In the former case, only the first ban takes the field with the regular army; the second remains at home to perform garrison duty. The *landwehr* consists of 227,000 of the first ban, and 180,000 of the second ban; making the whole war establishment 530,000. The *landsturm*, consisting of all not included in the preceding classes, serves only during war; yet not against the enemy, being occupied solely in maintaining internal peace and security.

A maritime force has never been an object of attention in Prussia, though she possesses a considerable extent of sea-coast.

SUBSECT. 4.—*Smaller States.*

The numerous states into which the German confederation is divided, have all internal arrangements peculiar to themselves. Only the constitution of leading states will here be delineated, leaving any peculiarities in the minor ones to be noticed in a succeeding section.

Bavaria very long ranked as the second state in Germany; she was once the successful rival of Austria, and as such beheld her princes seated on the imperial throne. Napoleon, in the view of employing the elector against the house of Hapsburg, greatly augmented his dominions, and invested him with the title of king. As he ruled him, however, with a rod of iron, the new king seized the first opportunity of joining the confederacy against the French emperor; in virtue of which, though obliged to restore the Tyrol and Saltzburg to Austria, he received elsewhere an ample compensation. Bavaria now possesses a territory of 1437 German, or about 31,000 English, square miles, which in 1830 was divided and peopled as follows:—

Circles.	German Square Miles.	Population.
The Iser	286	581,923
The Regen	198	419,949
Upper Danube	192	505,220
Lower Danube	155	407,541
The Rezat	148	539,039
Upper Mayn	198	523,789
Lower Mayn	170	542,475
Rhine	100	517,081
	1437	4,037,017

The king, in 1818, fulfilled his promise of giving his people a government moderately constitutional. The states consist of two chambers: the first is composed of the princes, the high nobility, and the heads of the church; the second, of deputies from the smaller land-

holders, the cities, the minor clergy, and even the universities. They meet only once in three years; but they enjoy the full privileges of such a body; since no new law can be passed, no new tax imposed, without having first been voted by them. The revenue of Bavaria amounted in 1830, to 29,200,000 florins, of which 5,500,000 arose from land-tax; 3,500,000 from house and other direct taxes; customs, 2,000,000; excise, 4,500,000; 2,000,000 from forests; 7,000,000 from royal domains and rents; 2,000,000 from mines and salt monopoly; 352,000 from the post-office; 1,200,000 from the lottery. The expenditure amounted to 28,400,000 florins; of which 3,005,000 were for the royal house and court; 8,000,000 for the army; 1,250,000 for religion; 1,270,000 for roads and bridges; 750,000 for public instruction; 1,240,000 for ministry of the interior; 1,708,000 for justice; 152,000 for public health: pensions, 4,500,000; public debt, interest, and sinking fund, 8,355,000. The regular army consists of 46,341 men: of which 29,232 are infantry of the line, and 7334 light infantry; 6408 cavalry, 3357 artillery. There is also a reserve to fill up the ranks of the regular army, and a *landwehr* for internal defence.

Saxony always ranked as one of the most powerful of the German electorates, until the ascendency gained by Prussia. The elector of Saxony received from Napoleon not only the title of king, but an addition of territory doubling that which he formerly possessed. He adhered to the last to that once powerful benefactor, on whose fall he was not only stripped of all the newly acquired territories, but obliged to surrender some of his former possessions. The extent of his present dominions is only 7200 square miles; but the population, being very dense, amounts to nearly 1,500,000 inhabitants. The government is not quite absolute, but has old feudal states, which must concur in the making of laws and the imposition of taxes. As they represent, however, only the privileged orders and the corporations, the peasantry and small proprietors are entirely thrown out, and have to bear an unequal share of the public burdens.* The revenue is now computed at 11,000,000 florins, the debt 36,080,000. The army, which in 1813, contained 37,000 troops, is now reduced to 10,000, with a reserve, however, of the young men between the ages of eighteen and thirty-one, who may be called upon to recruit its ranks.

Wirtemberg, originally a secondary German state, owed its aggrandisement and its kingly rank to Napoleon, and has been allowed to retain both. It contains 7500 square miles, with a population of 1,562,000. Wirtemberg has taken the lead among the constitutional states of Germany. On the 3d of March, 1817, the king granted a charter, by which the states, composed of two chambers, the nobles and the commons, are to be assembled every two years, and to possess all the privileges enjoyed under the best regulated limited monarchies. The king has a revenue of 9,224,000 florins, which somewhat exceeds the expenditure, but is burdened with a debt of 27,000,000. He maintains an army of 12,000, infantry, 3600 cavalry, and 2500 artillery.

The other principal states belong to monarchies out of Germany, of which they are only appendages.

Hanover, on the accession of its elector to the throne of Great Britain in 1714, saw this title and that of Brunswick-Luneburg merged in the greater name conveyed by this inheritance. It has always, however, been held as politically a foreign country. The Hanoverian has not the rights of a Briton, nor the Briton those of a Hanoverian. Britain may make war with all the world, and Hanover remain in profound peace. The converse of this proposition has not been found practically true, and Hanover has frequently drawn England into the vortex of continental war and policy. The kingdom of Hanover has an extent of 14,720 square miles, and a population of 1,550,000. There are provincial states in its several districts, and also a general assembly of the states, which shares with the sovereign the power of making laws and imposing taxes. The elections to the lower chamber, however, are made by the magistrates, who are themselves often elected in a manner independent of the citizens. The revenue is 10,800,000 florins, with a debt of 26,000,000, which causes an annual expense of 1,200,000. The army consists of 12,940 men, of whom about a third are cavalry; besides a *landwehr* of 18,000.

Of the other smaller states, Holstein and Luxemburg are so incorporated, the one with Denmark and the other with the Netherlands, as to be politically identified with them. Those smaller states which remain entirely German will be considered under the section of local geography

Sect. V.—*Productive Industry.*

The products of the industry of Germany, an extensive region cultivated by a laborious people, are of large amount. They consist of plain, solid, somewhat rough articles; in exchange for which, she procures the finer manufactures of England and France, and the delicate productions of southern Europe and the Indies.

Agriculture, throughout all this fertile region, is carried on with great diligence, though not altogether on the extensive scale, or with the intelligence, which have rendered British

* [By the constitution of 1831, the representation of the small proprietors and peasants in the Lower House is provided for.—Am. Ed.]

farming so successful. The cultivators are mostly little farmers or little proprietors, who till the ground with their own hands, and who, in all the Teutonic states, constitute a class called *bauer*, or peasants. The improved processes of this important art, however, are making their way, though slowly. The plough is the universal instrument of cultivation, except in some of the mountain tracts of Saltzburg and the Tyrol, where the spade is used. The horse in the north, and the ox in the south, are chiefly employed in tillage. Field after field spreads usually in an apparently boundless expanse, except in some parts of Westphalia and Holstein, where hedges are interposed to divide them.

Of the various kinds of grain, rye is the most extensively cultivated, and forms the food of the great body of the people. Wheat is also raised largely, and is of excellent quality, especially in Bavaria and Austria; buckwheat is sown chiefly on the sandy tracts of northern Germany. Barley and oats, of various kinds, are also general; and maize abounds in Moravia and the extreme southern districts. Peas, beans, lentils, and other pulse are produced in great abundance, and great quantities are sent out from the northern parts. Generally speaking, Germany is a corn-exporting country; for though Lower Austria receives grain from Hungary, and Silesia from Poland, yet this is not nearly equal to the quantity conveyed from Swabia and Franconia into Switzerland, and from the northern parts to Sweden, and also to Great Britain, when she will admit it. Garden vegetables are reared most sedulously, and in great perfection; the cabbage in particular, in the form of *sauer kraut*, is an object of exportation. Other useful articles are not wanting. Flax is raised in such immense quantity, that though it be the material of the staple and universal manufacture, there remains a surplus to be exported. Hops, a native German plant, are produced, especially in Bohemia and along the Mayn, in quantities more than sufficient for internal consumption. Rape is also a production peculiarly German, and vast quantities of rape oil are used both in manufacture and for lamps. Much oil is also expressed from other vegetable substances; yet, as Germany does not produce the olive, she is obliged to import both from southern Europe, and from the countries which participate in the northern whale-fishery.

Germany enumerates wine among her products, though not in the first class. All her southern districts, as far as the 51st degree, produce it; but only the hard, cold, agreeable wine, peculiar to the banks of the Rhine, and called Old Hock, is in much request abroad. Hassel reckons, however, that the country produces 12,000,000 eimers; of which quantity 4,500,000 are raised in Austria, the rest on the Rhine and its tributaries. This amounts to only one half of what Hungary, and one sixth of what France produces. It does not obviate the necessity of an extensive importation from France, Spain, and Hungary. The wine made on the Elbe and the Oder is of little use, except for vinegar.

In respect to live stock, the peculiar eminence of Germany consists in the hog, of which Hassel computes that 8,000,000 are annually slaughtered. Pork is, indeed, the most favourite food of the Germans, who, notwithstanding its abundance, even import quantities from Hungary and Turkey. On the other hand, Germany has a large export trade to France and the Netherlands, both of live hogs and of hams and sausages; nor does any ship touch at the northern ports without taking in a stock of these German supplies. Horned cattle also form the chief branch of rural industry in the mountainous districts of the south, Bavaria, Swabia, and the Tyrol. In the great northern plain they are used chiefly for labour, except in East Friesland, Holstein, and other marshy tracts, where they yield milk more abundantly than the hill-cows of the south, but it is of inferior quality. Cattle are imported from Poland and Hungary, but not nearly to such extent as the salted and dried meat exported to other countries. Hassel estimates the collective number of the oxen, cows, and calves of Germany at from 12,000,000 to 14,000,000. According to positive enumerations, excluding calves, the proportions are, for Austria, 2,600,000; Prussia on this side the Elbe, 1,328,000; Saxony, 710,000; Westphalia, 508,000; Wirtemberg, 600,000; Baden, 333,000; besides a great part of the empire in which no account has been taken. Germany is supposed to contain nearly 2,000,000 horses, which are not handsome, but well-built, strong and useful. They are particularly adapted for heavy dragoons, and for that purpose are sent into France and the Netherlands; but the German states cannot keep up their light cavalry without importation from the eastern countries. Sheep are numerous, not in the southern, but chiefly in the middle states, as Silesia and Saxony. The wool has been so much improved by crosses with merino and other breeds, as to have superseded the importation of Spanish wool, and even to have, in a great measure, supplanted it in the British market. There are supposed to be 20,000,000 sheep in Germany. Prussia numbered 3,768,000 after a war which had diminished her flocks by a full third. Bees'-wax and honey were a great ancient staple commodity of Germany; but since sugar has been introduced, and the Reformation, by diminishing the consumption of candles in churches, has reduced the demand for wax, this staple has greatly fallen; yet Lusatia, Luneburg, and some other districts, produce more than is wanted for Germany itself.

The forests of Germany are very noble, and are supposed to cover not less than a third of its surface. They are of every description, and for every use. It is complained, however,

that, of late years, great neglect, combined with profuse consumption of wood, either for luxury or manufacture, has considerably diminished the abundance of this article, which has risen in many places to six, eight, or even ten times its former price. Still a great quantity is carried down the rivers to the Netherlands and Britain, and pot and pearl ashes are made in the forests. Recently, the German princes, considering that the mines and many of the manufactories depend on a supply of wood, have made regulations to prevent its wanton consumption, and to ensure fresh plantations. They have even formed institutions, and founded lectures in the universities, for teaching the management and promoting the growth of wood; so that there is, perhaps, no country in which so much is done for securing to posterity a supply of this valuable article.

In manufactures, Germany does not retain that prominent place which she once held. Formerly the Hanse towns clothed all the north; but since the spirit of industry has been awakened, first in Holland, then in Britain, and lastly in France, Germany, instead of supplying those countries, has been inundated with their fabrics, and can scarcely maintain the superiority of her linens. Even this is a recent branch, introduced by the exertions of Frederick the Great and Joseph II. A great temporary impulse was given by Napoleon's continental system, under which all importation from Britain was prohibited. Cotton, in particular, then rose into extraordinary activity, and the whole Erzgebirge became one cotton factory. After the general peace, however, and the opening of the European markets, this artificial industry was found incompetent to sustain the rivalry of the British, whose superior skill and machinery enabled them to undersell the Germans in every market. On the other hand, Ireland had availed herself of the cessation of German rivalry to undertake the supply of linen to the colonies, the best market for that article. She made great progress also in the culture of flax, and the spinning of linen yarn, both which commodities the British manufacturers had been accustomed to import from Germany. That country thus not only lost the extraordinary impulse which its manufactures had received, but saw them reduced to a more depressed state than had been known at any former period.

Linen, one of the staples of Germany, has its chief seat in Silesia, where many very fine fabrics are produced, and where the entire produce is estimated at upwards of 1,500,000*l.*; in Bohemia, where it is supposed to be of little less amount; and in Lusatia. Coarse linen is fabricated in Prussian Westphalia, Hanover, Brunswick, and Hesse-Cassel. The woollen manufacture is very flourishing; and Germany is now, in a great measure, independent of foreign supply. Its principal seats are in the Prussian territory of Aachen, in Moravia, Bohemia, Silesia, Lusatia, and Saxony. Leather is produced in sufficient quantity to leave a surplus for exportation. The branches in which Germany excels are leather breeches, gloves, and every thing that relates to military equipment. Earthenware has been carried to great perfection. The porcelain of Meissen, Berlin, and Vienna, surpasses every thing of the kind in Europe, and in some respects even excels that of China. German tobacco-pipes are also distinguished. Bohemian glass is noted all over the world; nor is the manufacture confined to Bohemia, for it extends to all the surrounding territories. Crown-glass and mirrors are the branches for which Germany is most noted. The beer of Germany was formerly celebrated throughout Europe, but has long been surpassed by that of Great Britain. Her cotton fabrics, as already observed, have nearly fallen to the ground, and her manufacture of silk was never considerable. The following may be enumerated as minor articles:—sugar refinery, wax, oil, musical and mathematical instruments, clocks, watches, and wood-work toys. The German mechanics are usually formed into corporations, and are very skilful, holding the next rank to those of England. In cutlery they claim the pre-eminence.

Mining is one of the sources of wealth in which Germany may be said to surpass every country in Europe. Nowhere has the science of mining been more studied, or brought to greater perfection. Metals and minerals are produced in remarkable variety: gold; silver, not very abundant, but superior to that of the other European countries, at least if Hungary be included; mercury and cobalt, also superior; iron more abundant, and of better quality, than that of any other country, except Sweden; lead and tin, unrivalled except in Great Britain; a profusion of salt and coal. The principal mining districts are Styria and Carinthia, Silesia, the Erzgebirge in Saxony, the Hartz in Hanover. The entire products of German mining have been thus estimated:—gold, 182 marks; silver, 123,000 marks; copper, 39,000 cwt.; lead, 191,200 cwt.; tin, 7980 cwt.; iron, 2,400,000 cwt.; mercury and cinnabar, 13,980 cwt.; cobalt, 16,500 cwt.; calamine, 82,800 cwt.; arsenic, 10,600 cwt.; bismuth, 1500 cwt.; antimony, 2,400 cwt.; manganese, 1800 cwt.; salt, 3,150,000 cwt.; coal, 20,000,000 cwt.

The commerce of Germany, though extensive, is not equal to that which formerly existed, or to the advantages arising from her situation in the heart of Europe and of the civilized world. She was, after Italy, the first European country in which commerce revived; and the Hanseatic league once engrossed the whole trade of the north. In recent times, Germany has been outstripped by Holland, by Britain, and even by France. The German writers ascribe this decay to the want of unity consequent on the number of little states

into which their country is split, which deprives its ships of a national flag, and of a powerful protection while navigating remote seas. Their shipping is chiefly confined to Hamburg, Lubeck, and Bremen, the remnant of the Hanse towns, which still enjoy many of their old privileges in the ports of Europe, and whose flag is seen in every part of that continent. Germany labours under the difficulty of finding an outlet for the great quantity of commodities which she possesses fit for foreign markets; being hemmed in by nations more industrious than herself, destitute of colonies, and precluded by the maritime powers from any direct trade with the East and West Indies. These states rather look upon the great population of Germany as affording a market for their manufactures and the produce of their colonies. Her political disunion has been especially injurious to her internal trade, which would otherwise be immense. Each petty prince thinks only of promoting his own separate interest, by laying under contribution the commerce which passes through his territory. A boat which performs the whole navigation of the Rhine pays toll at twenty-seven stations: the number on the Weser is twenty-three; on the Elbe, thirty-two. The Danube and the Oder, the one passing chiefly through the territories of Austria, and the other through those of Prussia, are more free; but unfortunately the countries through which they flow do not afford the same scope for traffic. Treaties, however, have been for some time negotiating, by which it is expected that a great measure of freedom will be secured to the navigation of the German rivers.*

The exports of Germany include most of those productions in which she has been described as excelling: grain; salted provisions, especially hams; live cattle and hogs; timber; iron and steel; lead; salt; linen, linen yarn, and linen rags; some woollens to the north of Europe; porcelain, glass, ashes. In return for these essential articles, she receives nearly all the luxuries of life; the manufactures of Britain, the wines of France, the sweets and aromatics of the East and West; also dye-stuffs, and all the cotton and silk, which are necessary for her own manufactures. From the disunited state of the country, no general account appears to be kept; but the German economists labour under a dread of the imports exceeding the exports, and the consequent supposed loss from an unfavourable balance.

The internal commerce of Germany, notwithstanding all the obstructions under which it labours, is extensive. It owes this advantage chiefly to its noble rivers, on which vessels of large burden can pass nearly from one extremity to the other. The Danube, though the largest, and of longest course, is not the most beneficial. Its navigation is so difficult that vessels cannot make use of the sail, and must be dragged along by horses; rapids and cataracts obstruct it in several places; and its tributaries, the Inn and the Ens, descend only from the rugged heights of Styria and the Tyrol. It has a triple navigation, the ships of Ulm unlading their goods at Ratisbon, those of Ratisbon at Vienna, whence they are carried downwards through Hungary. The Rhine has a much more valuable navigation, continued from Switzerland to Holland and the Netherlands, and communicating by its great tributaries with the most fertile territories and the most industrious cities in the interior of Germany. It has of late been greatly facilitated by the employment of steam-vessels, which go up as far as Strasburg. The navigation of the Elbe is also very valuable. It begins at the junction of the river with the Moldau in the interior of Bohemia, and constantly improves, till at Hamburg the Elbe is capable of receiving the largest vessels. By means of the Spree and its canal, it communicates with the Oder, and brings down to Hamburg the productions of Silesia and Brandenburg. The commerce of the Oder itself flows chiefly in this channel. The Westphalian streams of the Weser and the Ems, though not of first-rate magnitude, are very commercial, giving support at their mouths to the ports of Bremen and Embden. The system of annual fairs for internal trade is still kept up in Germany to a much greater extent than in any other country. The grand fairs are those of Frankfort on the Mayn, for France and the Netherlands; Leipzig, for Russia, Poland, and the North; and also for the book trade; Bautzen, or Bolzano, for Italy. There are smaller fairs at Naumburg, Cassel, and Magdeburg; and a most extensive trade exists without fairs at Vienna, Augsburg, Nuremburg, Berlin, Cologne, and Breslau. Through these different channels is carried on an extensive interior trade, and a great foreign land-trade to Russia, Poland, Hungary, Italy, Switzerland, France, and the Netherlands.

Canals have not been extensively introduced to improve the interior trade of Germany, though no country affords greater scope for them; as, by joining the Danube, the Rhine, and the Elbe, the most distant seas of Europe might be made to communicate. To such undertakings, indeed, the disunited state of the empire must be a great discouragement. A few only have been executed on a small scale, and chiefly in the north. Such are the Holstein canal, which joins the Eyder to the Baltic, and opens a communication between it and the

* [A commercial league has lately been formed by the principal states of northern and central Germany, for the purpose of relieving internal commerce from the restrictions to which it has been subjected by the numerous customs-barriers of the different powers. The parties to this league agree to the suppression of all duties upon the internal commerce between their respective territories, and establish a common frontier, with a common rate of duties, in reference to their external commerce with other states. Prussia, Bavaria, Baden, Wirtemberg, Saxony, the Saxon duchies, the Hesses, Nassau, Frankfort, and several small states have already joined this league, which thus comprises a population of about twenty millions and a half.—AM. ED.]

North Sea; the Plauen canal, from the Havel to the Elbe, serving, with Frederick-William's canal from the Spree to the Oder, to connect the two great rivers of northern Germany, the Oder and the Elbe. The Vienna canal, completed to Neustadt, is intended to connect the Danube with the Adriatic.

Sect. VI.—*Civil and Social State.*

The population of Germany, according to official data collected in 1818 by the Diet, amounted to 30,375,679. The enumerations since made have generally exhibited a certain increase; in 1830, a careful estimate in the *Bulletin Universel*, from the works of Crome, Mohl, &c. rates it at 34,393,000; and in 1833, it may be rated at nearly 36,500,000. They inhabit 2433 cities, 2071 market-towns, and 88,619 villages and farms, independently of single houses. Germany has no great capital, like France and England, in which the wealth, power, and civilization of the state are as it were concentrated. On the other hand, no country in Europe has so many cities and towns of from 3000 to 5000 inhabitants.

The people who inhabit Germany are distinguished into two races, the German and Sclavonian. The Germans are estimated at 30,000,000, and are divided into two families, High and Low German, distinguished less by physical differences, than by character, and particularly by the mode of pronouncing the language. The High Germans inhabit most of the territory south of the Hartz and its branches, Upper Saxony, Franconia, the Rhine, Swabia, Bavaria, all the Austrian dominions, and Silesia. The Low Germans are in Lower Saxony, Westphalia, Holstein, Mecklenburg, Brandenburg, and Pomerania. The Sclavonic races are reckoned at 6,000,000, and constitute the greater part of the population in Bohemia, Moravia, and Silesia. They are much inferior in civilization to the Germans, but are a laborious race, formerly almost all in a state of bondage, but now mostly emancipated, and many of them possessing considerable wealth. Besides these leading races, there are about 175,000 Italians; from 20,000 to 25,000 French, and 250,000 Jews.

The social state in Germany exhibits two very distinct portions, not running into, or blending with each other, as in most of the civilized modern states. The class of noble birth hold themselves as separated by the most marked and decided line from the body of the nation. They have divided themselves into high and low nobility. The high nobles are those who either possess sovereign sway, or are descended from those who did, and are called mediatised princes. The low, or feudatory nobles, are those who cannot boast that any sovereign power ever resided in their family. There is another distinction, that of the old nobility, who must be able to count a line of sixteen noble ancestors, and of the young or short nobility. The cities, too, especially those that once ranked either as Hanse towns or as imperial cities, contain a class enjoying hereditary distinction as patricians or city nobles. The petty princes and great nobles of Germany thus retain much of the feudal habits, and their courts display rather rude baronial pride, and forms of empty pomp, than the polish and elegance of the great European courts. It must be owned, however, that they have produced many individuals of the greatest ability and most enlightened minds; and that their sway, though lofty, is generally mild, and even popular. The character of the body of the German people, has many estimable features. They are, perhaps, the hardest-working nation in Europe; slow, heavy, and laborious; and, through these qualities, have always been esteemed the most valuable colonists in newly settled districts. Their habits are simple and domestic; and plain honesty and fidelity usually mark their transactions. Rigidly excluded from court intercourse, their manners are somewhat plain and homely; and German wit, according to Madame de Staël, is the dullest of all possible things. Yet their poetry makes it evident that under this outward crust there is a vein of deep feeling and high fancy; partaking, indeed, too largely of mysticism; but we may add the universal taste for the highest class of music. The character of the Germans is very military; a quality derived from their feudal ancestors, and partly from their country having been the theatre of all the great wars which have been waged in Europe. "The common sounds," says Mr. Sherer, "in the cities of Germany are the clangour of military bands, the ringing of iron boot-heels, and the measured tread of stately soldiers:" hence the military character is said to rank higher there than in the neighbouring countries.

In regard to religion, Germany has been the scene of the greatest revolution in modern times. In its bosom the Reformation sprung up; and within it were carried on the most formidable of the conflicts between the old and the new system. Elsewhere, one or the other finally prevailed; but in Germany they have settled into a pretty equal division of the country. Speaking generally, the whole south may be called Catholic; the whole north, Protestant. Of the greater states, the Catholic religion rules in Austria and Bavaria; the Protestant, in Prussia, Saxony, Hesse, and Hanover. A complete toleration is now everywhere granted to every profession. The Catholics still hold the majority, being reckoned at 21,600,000, the Protestants only at 14,400,000. Jews, Moravians, Mennonites, Hussites, and some smaller sects, make up the rest of the population.

In literature and science, Germany has been particularly distinguished, and is perhaps the most learned and reading country in the world. Her writers exhibit that character of hard

and somewhat mechanical labour, which distinguishes her workmen in other departments. They are voluminous, and eminent for profound research; while they want some of the lighter graces of composition. In editing and illustrating the classics, in biblical criticism, and in statistical researches, no nation can come into competition with them; and since, in abstract science, they can name Leibnitz, Kepler, and Euler; in medicine, Haller and Van Swieten; in mineralogy, Werner and Möhs, no nation can triumph over them in these pursuits. In the metaphysical world also they have recently made a great movement; and the names of Kant, Fichte, and Schelling, are ranked by their followers almost as demigods. We confess ourselves among those who are able to discover only faint glimpses of meaning in the works of these learned persons, and are inclined to think, with Madame de Staël, that "the empire of the air" has been the portion of German metaphysicians. That accurate thinking is not the function which works best in the national brain, seems proved by the recent general prevalence of animal magnetism; to which we dare not add the profound sciences of cranioscopy and craniology. Till within the last half-century, Germany had no existence in regard to the belles-lettres, and the Teutonic language and genius were considered alien to every thing like fancy and poetry. Suddenly, however, Klopstock, Wieland, Schiller, Lessing, Göthe, claimed a place among the first poetical names, and distinguished themselves by bold and lofty flights of genius, which made a strong sensation throughout Europe. More recently, the exploits of the war of liberation have been sung in very lofty strains by Körner. We must not even in this hasty sketch forget Humboldt, who has established his name as the most learned and eloquent of modern travellers.

The institutions for the promotion of learning are very numerous in Germany. The chief learned societies are those of Munich, Berlin, Prague and Göttingen; but wanting the impulse of a national metropolis, none of them vie in celebrity with those of Paris and London. The universities are very numerous and very distinguished. Four are Catholic; that of Vienna, attended by 1600 students; Prague, 1450; Wurzburg, 583; Freiburg, 627. Heidelberg, with 820 students; Leipzig, 1384; Rostock, 150; Greifswalde, 159; Marburg, 357; Jena, 594; Giessen, 500; Kiel, 380; Halle, 1160; Göttingen, 1203; Erlangen, 449; Berlin, 2000; are Protestant. There are two of divided religion; Tübingen, which has 850 students, and Bonn, which has 1000. Instruction is given as in the Scottish universities, entirely by lectures; the students live in the towns, and are not subjected to any academical discipline. They are in general diligent in their attendance at lectures, but somewhat disorderly in their private conduct. Duelling is practised in a systematic manner, and formed almost into a regular science; hard drinking is alleged to be prevalent; and an ardent, but somewhat irregular patriotism has led to the formation of secret political associations, which have become an object of jealousy to the German sovereigns. The lectures are public and private, of which the latter only are remunerated with fees, and are hence usually the most valuable.

There are also institutions called Lyceums, which are numerous, especially in Austria, where lectures are delivered, but no degrees conferred. Common schools are also sufficiently numerous; and those for the instruction of the lower orders are so multiplied, that out of a thousand scarcely one will be found, it is said, who cannot read, or fifty who cannot write. In no country has education been more the object of study; and the systems of Basedow, Salzmann, Pestalozzi, and Jahn, have attracted general attention.

The literary and scientific collections of Germany are the most numerous and valuable that exist in any country. The imperial library at Vienna contains 300,000 printed volumes, 25,000 manuscripts, and about 70,000 pamphlets; that of Munich, 400,000 volumes; that of Göttingen, the most useful perhaps in the world, 280,000 volumes, 5000 manuscripts, and about 110,000 pamphlets; Dresden has 250,000 volumes; Wolfenbüttel has 190,000, including a rich store of ancient works, and 6000 bibles. Stutgard, 170,000 volumes, and 12,000 bibles. Berlin, 300,000 volumes in her public libraries; of which the king's contains 160,000. Weimar, Prague, Frankfort on the Mayn, Hamburg, Breslau, Mentz, Darmstadt, have each about 100,000. Marburg, Gotha, Jena, and many of the smaller cities, have very considerable libraries; and upon the whole it is calculated that in Germany four millions of volumes are accessible to the public. The cabinets of natural history, and especially of mineralogy, are numerous and valuable. The botanical garden of Schönbrunn, near Vienna, and that of Göttingen, are celebrated; as are the observatories of Vienna, Berlin, and Göttingen. The cabinet of medals at Vienna is the richest in Europe.

The book trade of Germany, in unison with the general taste for reading, has reached an extent which equals, perhaps, that of all the rest of the world. The nation numbers about ten thousand authors, who not only produce original writings, but translate immediately every foreign work of any celebrity. The works thus produced are brought annually to the Easter fair at Leipzig, to be distributed among the booksellers of Germany. The new works annually produced amount to about 4000. The want of any literary metropolis where there could exist a permanent depôt seems to have occasioned this arrangement, which appears in many respects cumbrous and inconvenient.

Of the fine arts, painting was very early and successfully cultivated in Germany; though

the works of Durer and Cranack have a rude and Gothic character, compared with those of the great Italian masters. In recent times, none of her painters have ranked in the first class: certainly that honour cannot be assigned to Mengs and Dietricy. Yet her princes have formed collections of paintings to which there is nothing equal out of Italy. The Dresden gallery holds the foremost rank; after which may be named the Belvidere at Vienna: the galleries of Munich, Berlin, Cassel, Augsburg, not to mention many private collections, especially at Vienna, which rival those of princes. To these are also attached very extensive collections of drawings and engravings. Music is the rage all over the nation; and the German composers, Handel, Haydn, Mozart, Beethoven, Weber, and Spohr, seem almost to have eclipsed the masters of Italy. In almost every village a concert of amateurs is to be found. Architectural genius has not shone with very great lustre. Very splendid edifices have been reared in the great capitals, and in the free cities during the days of their glory; but these have been chiefly formed upon Italian models. Sculpture has never risen above mediocrity. Engraving was early carried to great perfection by Albert Durer and others, called "the little masters," in a small and highly finished style; and in recent times, Frey, Wille, Schmidt, and Müller have maintained the reputation of Germany on a level with that of any other country.

The amusements of the Germans are rather of a more gay and elegant description than their character would lead us to expect. We have already noticed the extreme ardour with which music is cultivated. Equally frequent is the kindred amusement of dancing. The *waltz*, the national German dance, has not obtained the approbation of the moralists of other countries, and indeed appears liable to serious objections; yet Mr. Sherer assures us that in its native land, and performed in its genuine style, it appeared to him sufficiently innocent. The dress of the Germans has now few distinctions from that which has become general over civilized Europe. The pomp of array among the Austrian and Hungarian nobles, and the blaze of jewels which they display, dazzle the other nations of Europe. In food, the Germans have some hard and harsh articles, which are national favourites; ham, sausage, raw herring, sauer kraut, acid wine; and these they contrive to prepare in a manner which renders them agreeable to the palates of the neighbouring nations.

Sect. VII.—*Local Geography.*

The details of German geography are of immense extent, and extremely intricate; from the vast number of sovereignties, great and small, into which the empire has been split; the manner in which those are intermingled with each other, and the numerous transferences of territory which have taken place. It must be confessed that some degree of simplification was effected by numerous *arrondissemens* made during the war of the French revolution, and the absorption of many of the minor powers into the domain of their greater neighbours.

The division into circles, made by Wenceslaus in 1307, and by Maximilian in 1500, with reference to the different regions as parts of an elective empire, formed long the basis upon which every geographical description of Germany was founded. Its importance gradually declined, as Germany was broken up into entirely independent parts; and since the empire itself has been abolished, and the dignity of elector has ceased, the circles have no longer any political existence. Hence Hassel, in his recent description of Germany, has not even employed them as a principle of division, but has distributed the different parts solely according to the princes who actually hold sway over them. Yet the circles hold so great a place in history, and are still so frequently mentioned as recognised portions of Germany, that it may be advantageous to take a rapid sketch of their contents.

(1.) *Austria.* (2.) *Bohemia.* (3.) *Bavaria.* The two first of these form the principal part of the hereditary dominions of the house of Austria; the last includes those of Bavaria, with little or no intermixture.

(4.) *Swabia.* This circle is distinguished by its grand and bold aspect, produced by the Black Forest, the bordering mountains of Switzerland, and the upper course of the Rhine and the Danube. The dukes of Swabia, who for some time held the empire, have long been extinct. This circle comprises the kingdom of Wirtemberg, the Grand Duchy of Baden, and the great imperial cities of Augsburg and Ulm.

(5.) *Franconia.* The dukes of Franconia, who once also ruled Germany, are nearly forgotten in that duchy. It has not been the seat of any considerable sovereign state, since the principalities of Anspach and Bayreuth were occupied by Prussia, who was obliged to cede them to Bavaria. This circle is chiefly distinguished by its great imperial cities, of which the principal are those of Nuremberg and Frankfort on the Mayn; the latter still retaining its nominal freedom, and its extensive home trade.

(6.) The *circles of the Upper and Lower Rhine* comprise the most fertile and beautiful portion of Germany, the choicest vineyards of which are on its hills. Since the fall of the elector palatine, from whom a great part of it was called the Palatinate, it has been split into various parts, and occupied to a great extent by powers without the circle. Hesse-

Cassel and Hesse-Darmstadt are considerable states, whose dominions lie chiefly within the Upper Rhine; while Prussia possesses the most valuable part of the Lower Rhine. This circle has been much distinguished by its sovereign bishops, those of Mentz, Trèves, Cologne, who ranked once as electors, and vied in pomp and power with the greatest princes. They gave way, however, before the late shocks, have been deprived of their sovereignties, and their domain reduced within very narrow limits. This circle is also remarkable for the chain of mighty fortresses, the barriers of Germany, which have been erected along the frontier stream of the Rhine.

(7.) *Westphalia* is also a very miscellaneous circle, the chief portions of which belong to Prussia and Hanover. It does not appear to have formed an independent sovereignty, except during the ephemeral sway of Jerome Bonaparte. Westphalia is in general a level and fertile district, of which the inhabitants are industrious. It is traversed by the Weser and the Ems; and its foreign trade is carried on by the Hanse towns of Bremen, Verden, and Emden.

(8.) *Lower Saxony*. The name of Saxony applies to that great extent of northern Germany originally occupied by the Saxons, the once powerful and warlike conquerors of Britain. It is generally level, forming a continuation of the immense plain of continental Europe. Lower Saxony consists chiefly of Hanover with Brunswick; but portions of it are held by the kings of Saxony and Prussia. The lower course of the Elbe flowing through this circle, makes it the theatre of an extensive trade, which centres chiefly in the great Hanse town of Hamburg.

(9.) *Upper Saxony* is the most extensive, and perhaps most important, of all the circles. It includes Brandenburg, the central seat of the king of Prussia's territories, and Saxony Proper, which forms nearly the whole of the territories constituting the electorate, now kingdom, bearing that title. It contains the large and fine capitals of Dresden and Berlin. It has also a considerable extent of sea-coast; but this being on the Baltic, is not so favourably situated for commerce as that of Lower Saxony.

The local divisions of Germany must now be considered according to the sovereigns by whom they are ruled; that being the only political distinction now recognised.

SUBJECT. 1.—*Austrian Dominions.*

More than half the dominions of the house of Austria are out of Germany. The Lombardo-Venetian kingdom, as a local division, came under Italy, and Gallicia will come under Poland. Hungary, however, with its appendages, forms so extensive and important a territory as to be entitled to a separate chapter.

The German territories belonging to the Austrian emperor consist of the archduchy of Austria, Bohemia, Moravia, Styria, Illyria, and Tyrol; the extent and population of which have been already given from the latest authorities.

Lower Austria, or Austria below the Ems, forms as it were the metropolitan province, being situated in the very heart of this vast empire. It is composed of the deep and warm valley of the Danube, bordered on each side by considerably elevated mountain chains. Those on the south form a part of the great Alpine barrier; inferior, however, to the gigantic ranges of Switzerland and the Tyrol. They are called the Noric Alps: their higher eminences extend along the Styrian frontier, though they shoot long branches into the heart of Austria. The most elevated summits are the Schneeberg, 6521 feet; the Oelscher, 6060; the Wechselberg, 5574; the Simmering, 4416. On the northern side a chain of mountains, connected with those of Bohemia, separates the valley of the Danube from those of the Moldau and the Elbe; but it has no alpine character, and does not rival the elevation of the southern chain. Between the two lies another branch, of which the highest point is the Kalenberg, and eastward from which the land slopes down to the vast watery plains of Hungary. A great extent of these hills is covered with wood, while many parts on the contrary are rocky and barren; so that this is rather a picturesque than a naturally fruitful country. A large portion, however, is laboriously cultivated. The entire surface is reckoned at 2,870,000 jochs (1½ acres each), of which about 600,000 are water and waste, 1,280,000 arable, 78,000 vineyard, 650,000 pasturage, and 860,000 woodland.

The produce of wine is reckoned by Blumenbach at 2,000,000 eimers (nearly ten gallons each); of which about 500,000 is exported, and 50,000 made into vinegar. The pastures, which are diminishing, sustained in 1815, 57,590 horses, 89,909 oxen, 196,565 cows, and 345,697 sheep. The breed of horses is greatly improved by the demand for the imperial studs, and that of sheep by the introduction of merinos. Lower Austria is the most manufacturing district of the whole monarchy. In 1819 it was reckoned to contain 18,044 looms, 520 printfields, and 2368 water-mills; giving employment to 57,121 manufacturers, independent of weavers, of spinners, and other workmen. These manufactures, in the order of their importance, are cotton, silk, linen, iron, copper, jewellery, glass. Vienna is also the centre of the internal commerce of the whole monarchy.

Vienna (*fig.* 416.) the great and ancient capital of Germany, is seated on the southern bank of the Danube, not more than twenty miles from the frontier of Hungary. The original city, surrounded by its once formidable walls, does not exceed a sixth of the space covered by the thirty-four suburbs, which stretch in an almost interminable extent, but are all surrounded by a brick wall serving for purposes of taxation and police. The body of the place displays a sober and solid stateliness, without gloom. The houses are massive and lofty; and, like those of Edinburgh, divided among a number of families, with a common staircase. Every house has a master, who looks to its general cleanliness and security, and shuts the common door at ten at night. There are on an average thirty-eight men in every house in Vienna, and there is one which contains 400. The city is rendered very handsome by the great number of mansions, justly entitled to the name of palaces, which are held by the high Austrian and Hungarian nobles. There are few very prominent single edifices. Even the original palace of the house of Hapsburg (*fig.* 417.) is represented as a collection of dissimilar and ill-assorted masses, added to each other as convenience dictated. That of Belvidere is more attractive, from rich collections; and the rural palace of Schönbrunn, from its fine gardens. The cathedral of St. Stephen (*fig.* 418.) is the largest church in Germany, and unites all that is lofty, imposing, and sublime in Gothic architecture. A colossal and equestrian monument of Joseph II., by the German sculptor Zauner, adorns the square which bears that emperor's name. In other instances Austria has withheld this mark of gratitude from her great men: hence the relict of the great Marshal Laudohn, having placed a monument of him at his country-seat, inscribed on it:—"Erected not by his country, not by his sovereign; but by his widow." Vienna has a number of other churches that are highly ornamental, particularly that of St. Lorenzo (*fig.* 419.), a Gothic structure of great

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Vienna.

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Square of Imperial Palace, Vienna.

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Cathedral of St. Stephen.

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Cathedral of St. Lorenzo.

elegance. By the census of 1815, Vienna was found to contain 7150 houses, in which were 56,749 families, and 238,177 persons; of whom 111,340 were male and 126,831 female. According to an official statement in 1829, the population had risen to 289,785; of whom 142,654 were male, and 147,137 female. At present, it exceeds 300,000. In 1810, 9,000,000 florins were paid for house-rent; and the value of private houses was estimated at 150,000,000. In 1815, the year's consumption for the city was thus stated:—84,000 oxen, 93,000 calves; 70,000 sheep; 356,000 eimers of Austrian wine, 40,000 Hungarian, only 600 foreign; 571,000 eimers of beer; 3,210,000 bushels of grain. Vienna is the most manufacturing city in the monarchy. In 1811 there were 10,800 looms, and about 60,000 people employed

on them. The tradesmen of Vienna are also reckoned the best in Germany. There are 6000 masters, 23,000 journeymen, 6000 apprentices, and 24,000 females employed. Shoes of Vienna manufacture are in request all over Germany. The city is also very commercial; and the bustle in its streets is not equalled even in an English trading town. The art of effecting a safe passage through them on foot, amid the crowd of carriages, hackney coaches, loaded wagons, and wheelbarrows, there being only a slight indication of foot-pavement, is said to remain a mystery even for those who have had the most extensive London experience. The driving a coach through with speed and safety is an attainment which the most skilful coachman from other cities cannot attain without very long practice.

Vienna is not a literary city, and is perhaps the largest that exists without an academy either of science or belles lettres. Yet there are few that contain more extensive collections of books, paintings, and objects of natural history, both in the royal palaces and the houses of the nobles. The censorship of the press is maintained with the utmost rigour; and the great object of the court seems to be, that nothing shall appear which can in the smallest degree reflect upon the imperial house or government. Mr. Russell even reports of the present emperor, that, when treating of some seminary of education, he observed, "I do not want learned men; I want men that will do what I bid them." The drama in Vienna, as over all Germany, is a favourite amusement; but none of the leading dramatic writers belong to that city, which ranks, however, as the musical capital of Germany, and even of the world. If some of those whose names distinguish its harmonic annals were not native, at least they found there the patronage by which their exertions were excited, and their talents developed.

The manners of the people of Vienna are the subject only of qualified encomium. They are described as a more eating, drinking, good-natured, ill-educated, laughing, and hospitable people, than any other of Germany, or perhaps of Europe. In regard to themselves, they are distinguished by a love of pleasure; in regard to strangers, by great kindness and hospitality. The pleasures of the table seem to be prized in a very especial manner. The most profound skill is attributed to the cooks of Vienna; and Dr. Townson even expresses apprehension that a scarcity of the livers of geese, their favourite dish, might endanger the tranquillity of the empire. The citizens are seen in crowded parties of pleasure on the ramparts, and in the fine wooded public walk called the Prater, between the city and the Danube. This eager pursuit of pleasure is unfortunately not always confined within the bounds of innocence. The dancing balls, to which persons of every class are admitted, attract a large proportion, at least, of the most profligate. Mr. Russell has not hesitated to make a charge of general dissoluteness; and adds, that there is not a female in Vienna who will not increase her means of amusement and show by the sacrifice of her virtue. M. Sherer, however, "who scans his nature with a brother's eye," argues that the scum which floats on the surface must not be too partially taken as the criterion of the whole composition. The family parties in the Prater appeared to him to show rather an air of quiet and natural cheerfulness, than of dissolute gaiety; while the neatness and care with which the children were dressed, their smiling and happy countenances, seemed by no means to bespeak parental profligacy. They appeared to him altogether an honest, affectionate, cheerful, frank, and obliging race.

Lower Austria has few other places of any consequence. Baden, fourteen miles to the south, on the frontier of Styria, and at the entrance of the beautiful vale of St. Helena, has become highly distinguished for the baths, from which it derives its name, and which attract from 2000 to 3000 annual visitants from Vienna. The springs, strongly impregnated with sulphur and and carbonic acid gas, are considered specific in cutaneous diseases, and useful in many others. The bathers sit or walk for an hour or two up to the neck in water. Kloster Neuburg and Korn Neuburg, on the opposite banks of the Danube, are old castellated towns. Krems is also a well-built place, surrounded by old walls, and containing a lyceum and gymnasium. Aspern and Wagram are villages opposite to Vienna, only distinguished for the great battles fought there in 1809.

Upper Austria is entirely a mountain region, an assemblage of lofty alps and glaciers, separated by valleys, and even by small plains, and presenting landscape sometimes soft and pleasing, sometimes in the highest degree wild and romantic. These mountains consist of the main body of the Noric, and the borders of the Rhætian Alps. Among the loftiest summits are the Gross Glockner, 12,776 feet high; the Weissbachhorn, 11,510; the Hochhorn, 11,000; the Dachstein, 9518; the Hohekreutzburg, 8688. On the opposite side of the Danube, Upper Austria is bounded, and in a great degree covered, by the Bohemian forest. It is most copiously watered, not only by the Danube, but by the Inn, the Traun, and the Ens; and has the Kammersee, the Mondsee, the Zellersee, the Traunsee, and other lakes, which are romantic and well supplied with fish, but of little extent. It is needless to say that the country is little fitted for agricultural purposes; yet there is no district of Germany which has been improved with greater diligence. Of 3,287,264 jochs, of which this rugged surface consists, not more than an eleventh part is abandoned to absolute waste. There are 837,000 arable acres, 1,167,000 pasture, and 969,000 wood. The quantity of grain produced is about 9,000,000 bushels. The chief branch of husbandry, however, is pasturage,

and the meadows of Upper Austria are reckoned superior to any other in Germany. Horticulture flourishes, especially in apples, from which 40,000 or 50,000 eimers of cider are made. There are very extensive salt mines, yielding 900,000 cwt., and supplying a great part of Germany.

The cities in this rural district are not of the first magnitude. Lintz, the capital, and the seat of administration, situated on the Danube, is a well-built city; and its fine square, considerable castle, three monasteries, and bridge of 800 feet long over the Danube, give it a very handsome appearance. It has a considerable imperial manufactory of woollen. Wells, the capital of one of the circles, is smaller, but carries on some trade. Steyer, at the confluence of the Traun and Steyer, is a very thriving place, the inhabitants of which have increased, since 1803, from 7000 to 10,000. It flourishes by its ironworks and by the manufacture of various articles; also by that of mixed woollen and linen cloths. Braunau, a small but very strong place, on the frontier stream of the Inn, has been considered the bulwark of the monarchy, though it did not, in any of the late wars, arrest the tide of invasion.

The bishopric of Saltzburg forms a detached district of Upper Austria, ceded for a time to Bavaria, but restored at the peace of 1814. It is a completely alpine region, presenting all the Swiss features of rocks, glaciers, torrents, and mountains covered with eternal snow.

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Saltzburg.

The Noric and Rhætian Alps approximate, leaving between them the broad valley of the Salza, connected with many others, which present the most beautiful features of nature, and afford ample scope to human industry. Saltzburg (*fig.* 420.) ranks with the most picturesque cities in Europe, being built on several irregular hills, with the loftiest alpine summits towering behind. Its edifices correspond altogether to the grandeur of the surrounding scenery. The strong castle, with the arsenal, the bishop's palace, and the cathedral, are built in the grandest style of architecture, and placed in the most lofty and commanding situations. Several other fine buildings were consumed by fire in 1818. Saltzburg has a lyceum, with eleven professors; two libraries, containing together 56,000 volumes; and a school of medicine.

Steyermark, which we call Styria, is a considerable inland territory, immediately to the south of Lower Austria, once governed by its own dukes, but long since absorbed in the empire. It is divided into Upper and Lower Styria; the former of which, being the western part, is altogether alpine; while the eastern districts decline into lower mountains, then into gentle hills, and finally into almost a level plain, on the borders of Hungary. The mountains are not so elevated as those of Switzerland; and though some glaciers remain in the valleys throughout the summer, they do not regularly attain the limit of perpetual snow. The highest are, the Grossenberg, 8381 feet; the Eisenhut, 7676; the Grimming, once accounted the loftiest, only 7540; the Stangalpe, 7140. The Mur, which crosses Styria from west to east, and passes through Hungary into the Danube, is a broad and rapid stream; but its navigation is so obstructed, that it is only useful for floating down the timber made into rafts, which are often dashed to pieces. The Drave, the Save, the Raab, and the Ens, water particular parts of Styria. Of the 3,800,000 jochs of which it consists, about 1,500,000 are woodland; 1,080,000 pasture; only 558,000 arable; 50,000 vineyard. The grain is chiefly maize (used both for the cattle and for the bread of the lower orders), rye and buck-wheat; and the annual produce is estimated, by Kindermann, at 7,800,000 bushels. Flax, hemp, and potatoes are general. The wine is reckoned at 1,000,000 eimers, and is stronger and more fiery than the Austrian. But the most valuable produce is that of the mines in the upper province, which are various; the most considerable is very fine iron, peculiarly fit for being formed into steel. Besides the numerous furnaces employed in extracting the ore, there are large manufactures of scythes, sickles, and chopping-knives; a great part of the iron also is worked up in Austria, and is even exported to England and France. Of the eastern province, a considerable extent is occupied, not by German inhabitants, but by the Winden, a rude Sclavonian race, who do not understand the language of the Germans, and live in a much poorer and ruder manner.

Of the towns of Styria, Gratz, the ancient residence of the dukes, is the capital: it is situated on the Mur, in a fine valley, on the borders of the lower district. It is a handsome, bustling, and prosperous town, and contains many houses which may be called palaces. Indeed, it ranks the third in the hereditary dominions, and contains 2651 houses, with a population of 36,144. Its old walls and castle, situated on a high rock, no longer suffice to render it a fortified city. The church of St. Catherine, and the monument of Ferdinand II., are its chief ornaments. Its lyceum, the only one that exists in the province, has twenty-six professors, and a library of 70,000 volumes. It carries on a considerable trade,

particularly in iron, and has two yearly fairs. The female population of Gratz are celebrated for their beauty. Bruck, the capital of a district in Upper Styria, is a small and dull town. Mosburg is a larger place, carrying on some trade. Cilly, Judenburg, capitals of particular districts, and Leoben, where the preliminaries of 1798 were signed, are only large villages. Mariazell, a village on the Austrian frontier, attracts crowds to view an uncouth image of the Virgin there deposited. It was once enriched by many precious donations, among which were the images, in silver, of the Empress Maria Theresa, and all her family; but her son, Joseph II., being pressed by financial difficulties, not only melted down his mother, and all his brothers and sisters, into coin, but seized a great part of the other treasures.

The kingdom of Illyria was formed by Napoleon, after the peace of Presburg, when he had compelled Austria to cede to him the whole south-eastern angle of Germany, Carinthia, Carniola, and Friuli; to which he annexed part of Croatia and the Tyrol. When all these territories returned under the dominion of Austria, she still retained the newly created kingdom, only severing from it the last two appendages. The kingdom, thus modified, contains a superficial extent of 13,590 square miles, according to Blumenbach, but only 13,480, according to Lichtenstein; Col. Traux gives 1,138,000 as the population by the latest enumeration in 1829. This region is extremely mountainous and rugged, though the highest chains are on the frontier of Upper Austria and Styria, where Illyria claims a part of the stupendous mass of the Gross Glockner. Its own proper chains are those of the Carnic and Julian Alps, which cover the greater part of the territory; some of the loftiest pinnacles rise above 10,500 feet. The large stream of the Drave passes through Carinthia, and that of the Save through Carniola, into Hungary. The rugged surface of Illyria is, in many places, very ill-fitted for corn, of which it, however, produces 9,000,000 bushels, chiefly of the coarser kinds, rye and oats. There is a good deal of flax, and a little hemp and silk. Cattle are fed in great numbers, and sheep in the more bare and rocky tracts round the Adriatic. Lead is produced more copiously than in any other part of the empire (about 2000 tons), and mercury more abundantly than in any part of Europe (640 tons); iron, 17,500 tons, and considerable quantities of antimony, alum, vitriol, coal, and salt. The chief branch of manufacture is that of working in metals, iron poles, wire, scissors, sickles, hooks, &c. There is also a good deal of linen and some woollen. The foreign commerce is considerable: the only sea-ports in the Austro-German territories, Trieste and Fiume, are situated in Illyria.

The physical structure of this country is very singular, its mountains being composed of that soft and porous limestone which is subject to extensive perforation. Illyria is said to contain upwards of 1000 caverns, many of which receive and send forth subterraneous rivers. The most considerable is the Laybach, which issues at once a broad stream from the bosom of a mountain. Its caverned course is accessible by a majestic natural gateway, forty feet high, and regularly arched. This leads into a spacious cavern, beneath the gigantic walls and vaulted roof of which the river is seen flowing. The cavern cannot be traced far up; but the river is still heard rolling over its rocky bed in the interior of the earth. Of all the caverns, the most extensive is that of Adelsberg. The entrance is by two large apertures, into one of which a river flows, and accompanies the visiter in his progress through this dark passage. At length it reaches an extensive natural cavern, and having penetrated a ledge of rock, plunges under ground, and is seen no more. Here a precipitous rocky wall formerly arrested all further advance; but about ten years ago it was scaled and found to lead to a double range of most magnificent caverns, or natural palaces, supported by pillars, and fretted with cornices of the purest stalactite. The columns are in some places so nicely clustered together, and so regularly arranged, as to resemble the nave of a Gothic cathedral. The roof is in part so lofty as not to be discoverable from beneath. Not a sound is heard beyond the occasional dropping of the water, except once a year, when a ball is given by the peasantry in one of the most spacious caverns. Here, many hundred feet beneath the surface of the earth, and a mile distant from the light of day, the simple music of the Carniolan rustics resounds through more magnificent halls than ever were built for monarchs. At the end of six miles, the range terminates in a deep, clear, and cold subterraneous lake, which has not yet been passed. The Lake of Zirknitz is another of the wonders of Illyria. Its celebrity is founded on the periodical flux and reflux of its waters into and out of the bowels of the mountain. In winter and spring its basin, measuring six miles by three, is entirely filled. On the approach of midsummer it begins to diminish, and in the course of a few weeks, is entirely drained. A luxuriant crop of grass, or even rye, is then raised in its abandoned bed; and the sportsman shoots game, where shortly before he was fishing for pike. The caverns are then seen gaping, through which the waters descended; and at the end of autumn, when the rains set in, water rushes out from them and from others, and the lake is rapidly filled.

The cities of Illyria are:—Laybach, an ancient place, the principal seat of government, containing about 11,000 inhabitants, a lyceum, and some manufactures of silk and porcelain. It is distinguished as having been the seat of that congress in which the Holy Alliance

decided the fate of Italy. On a hill above it stands the strong castle of Subiana, the place of confinement for the Italian liberals. Clagenfurt, a town of equal size, has also a lyceum, some manufactures of cloth, and a considerable transit trade. Villach is only about half its extent, but has considerable traffic in the produce of the mines, and in the conveyance of goods between Germany and Italy. The only Austro-German sea-ports are in the kingdom of Illyria. Trieste, made a free port about the close of the last century, has increased so rapidly, as to be now one of the principal havens of Europe. Its population, in 1815, was 36,000, but has since risen to upwards of 42,000. In 1815 it was entered by 7676 large vessels, and 275,000 tons of goods were exported. Its exports to North America alone, in that year, amounted to 250,000*l.*, and the imports to 200,000*l.* Fiume, at the head of a more easterly bay, is to Hungary what Trieste is to Germany; but this trade not being so important, supports only a population of about 8000, and enables Fiume to send out from 1200 to 1500 sloops.

The Tyrol, including Vorarlberg, is the most westerly of the German territories of the empire, and borders upon Bavaria and Switzerland. It is also the most lofty and rugged of all the alpine regions of Austria. It is, indeed, a sort of projection from Switzerland, which it entirely resembles, except in the absence of extensive lakes. It presents mountains reaching to the skies, and crowned with eternal snows, or with rocky pinnacles; awful abysses, with thundering waterfalls; fields of ice stretching miles in extent; avalanches rushing down the steep sides,—the whole aspect of nature presenting a scene of awful majesty and fearful beauty. The Ortles, the highest peak yet measured, has been found to reach an altitude of 12,852 feet; and there are others, particularly in the Oetzthal, which might also stand by the side of Mont Blanc and Monte Rosa. The Schernowand is 11,645 feet, the Phalleyhugel 9756, the Sollstein 9106. Some of the chief tributaries of the Danube (the Inn, the Lech, the Iser,) pour down from the heights of the Tyrol. Agricultural industry cannot flourish on such a surface; as, of 1,500,000 jochs, only a tenth can be subjected to the plough, and then only rye, wheat, and barley can be grown. The Tyrolese, however, have made all that was possible out of their rugged soil. They have a great store of horned cattle and sheep; valuable gardens, from which apples are sent even to Russia; good wine, though it will not keep; some tobacco; wood, and salt in abundance. The other mineral productions are in considerable variety, but of no great amount. The national character of the Tyrolese is excellent. They are honest, sincere, and open-hearted. Their attachment to their country, to its independence, and to the house of Austria, has been displayed in the most heroic manner. The exploits which their undisciplined and almost unarmed bands performed in the last war, form one of the brightest pages of modern history. They are almost all Catholics; but their religion, according to this creed, is genuine and sincere. Their enterprising industry is strikingly displayed by the boldness with which they mount the steepest cliffs, and are thence let down by ropes, in order to cultivate like a garden a little spot that to a stranger would appear inaccessible.

The towns of the Tyrol are Innspruck, the capital; an ancient, well built, and considerable place, with 10,800 inhabitants, commanding the valley of the Inn, and the most direct passage from Germany into Italy. Hall, farther down on the same, flourishes by large mines of salt. Kuffstein is important as a military position. Trent, on the Adige, and near the borders of Italy, is a fine old city, celebrated for the ecclesiastical council held there in 1545–1562, which had so signal an influence on the political destinies of Europe. Roveredo, still further down, and almost Italian, carries on some silk manufactures. Botzen, or Bolsano, has a crowded market, where the German and Italian merchants exchange the commodities of their respective countries. Brixen, Bregenz, Feldkirch, (the last two in the Vorarlberg, and on the borders of Switzerland,) are also of some consequence.

Bohemia is the most considerable and most valuable of all the Austrian territories in Germany. It consists of an extensive plain, completely enclosed by a ring of mountains, of which the Riesengebirge separate it from Silesia, the Erzgebirge from Saxony, those of the Bohemian forest from Austria and Franconia. These chains run from 3000 to 5000 feet, and none of them shoot up those awful pinnacles, covered with eternal snow, which range along the Swiss and Italian borders. Bohemia is the most completely inland country of Germany, being nearly equidistant from the North Sea and the Adriatic. With the former, however, it communicates by the great stream of the Elbe, which rises in and rolls through all Bohemia, receiving its great tributary, the Moldau, and all its other waters. There is, perhaps, no country on earth more amply stocked with all kinds of solid and useful commodities than Bohemia. Grain, cattle, timber, metals, are all in such plenty, that it is difficult to say which predominates. Of 7,769,000 jochs, 3,608,000 are arable, which, in 1785, produced 52,000,000 quarters; the proportions of which were, 17,000,000 rye, 14,000,000 oats, 17,000,000 barley, 2,500,000 wheat; and the amount is now supposed to be from 50,000,000 to 60,000,000. Flax is raised to the amount of 8000 tons, which yet is not sufficient for the manufactures of the country. Horned cattle, though very numerous, have been somewhat diminished of late years; but the breed both of horses and sheep has been much improved. In 1817, there was a census, which returned 121,000 horses, 241,000

oxen, 601,000 cows, and 907,000 sheep. The hops are the best in the world, and there is a profusion of apples and pears; but the wines are in small quantity, and scarcely drinkable. From the mines are drawn various metals, of which the most peculiar is tin, to the amount of 275 tons. Even fishing is carried on very actively in this inland situation, by means of ponds, which are said to exceed 20,000 in number. The manufactures of Bohemia are also most extensive. That of linen is the staple, including not only the common fabrics, but the finer ones of damask, cambric, lawn, and tape. In 1811, this manufacture was said to employ 400,000 spinners, 55,000 weavers, and 3000 bleachers. That of wool once employed 50,000 spinners, and 20,000 weavers and other workmen. In the cotton branch, the number employed is computed at 36,000. There are 3000 hat-makers; and the glass of Bohemia is famed over all Europe. In 1801, the entire value of Bohemian manufactures was reckoned at nearly 4,000,000*l.* sterling; the pay of the workmen 1,500,000*l.*, and that of the spinners 400,000*l.* Yet it is remarked, that there is little appearance of the wealth which Bohemia actually contains. The nobles, indeed, possess immense estates, the value of which is estimated at nearly 45,000,000*l.* sterling, firmly secured by entails and other legal provisions; but they spend their fortunes chiefly in profuse pomp and luxury at Vienna. The population, in 1775, was only 2,531,000. In 1817 it had increased to 3,236,000; but by the census in 1827, to 3,783,640: of these 1,810,742 were males, and 1,972,898 females. Two thirds are of Sclavonic race, and there are about 50,000 Jews. The Bohemians, beyond any other German people, made an early and noble stand in the cause of civil and religious liberty. Not only after Luther, but long before, the standard of the Reformation was reared, after the death of John Huss and Jerome of Prague; but these glorious efforts had a fatal issue. Overwhelmed by the arms of Austria, the Protestants were either driven out of the kingdom, or compelled to renounce their worship; and it was not until the end of last century, when the principles of toleration began to influence even the Austrian cabinet, that about 34,000 Protestants resumed the exercise of their religion. Amid the same convulsions, the civil rights for which Bohemia had so nobly contended were all wrested from her, and she retains only a semblance of national states.

Prague (*fig.* 421.), the capital, is situated in the very centre of the great plain of Bohemia. Its bridge, its old Gothic cathedral on a hill, the vast and decaying palaces of the ancient nobles, the old style of architecture in the private mansions, unite to give it an antique and characteristic grandeur. In the cathedral is particularly distinguished the magnificent silver shrine, which has survived the wars of centuries. Among the vast forsaken palaces may be distinguished that of Wallenstein, the frescoes of which are still bright; and that of Czernim, still more vast, but quite dilapidated. Prague appeared, on the whole, to Mr. Sherer, more picturesque and more impressive than Vienna. The population, in 1817, amounted to 79,606, of which 6783 were Jews; but, by documents collected in 1826, Dr. Sulzig estimates it at 105,000, independent of 12,000 troops in garrison. Of these, 527 were clergy, 883 nobility, 2093 public functionaries, and 5608 artisans. There is a considerable spirit of literature, and of making literary collections, in Prague. It has an academy of sciences, an university with 44 professors and 879 students, and a library of 100,000 volumes. There is a national museum, an academy of painting, fifteen good picture-galleries, and a conservatory of music. The trade of the kingdom centres very much in Prague; and three great annual fairs are held there. The city is kept very clean, but indifferently lighted, and some of its streets are unpaved.

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Prague.

Bohemia has a number of little towns of from 2000 to 5000 inhabitants, but no great cities, except its capital. We may mention Budweis, Pilsen; Königgratz, a strong place on the Silesian frontier; Eger, a military position on the side of Franconia; Tabor, founded by the Hussites, who gave it this scriptural name; Töplitz, celebrated for its baths. The manufactures are chiefly carried on in small towns and villages, and do not accumulate in the larger cities.

Moravia, in which we shall include the small part of Silesia which remains to Austria, is a country of less extent than Bohemia, but of nearly similar aspect, and equally fertile. It has also a frontier of high mountains; being bounded on the one side by those which separate it from Bohemia, on the other by the Carpathian mountains, beyond which are Poland and Hungary. Smaller chains penetrate the country, and render the full half of it mountainous; but broad and fruitful valleys intervene, and the southern part consists of fine and extensive plains, the soil of which is peculiarly rich. The March or Morava, rising in the Silesian frontier, traverses the whole country, bearing all its tributary waters down to the

Danube. Moravia contains 2,070,000 jochs arable, 750,000 pasture, 50,000 vineyards, 1,120,000 in timber The produce is, wheat, about 2,600,000 bushels; rye, 8,000,000; barley, 3,500,000; oats, 16,000,000. The live stock, 127,000 horses, 357,000 oxen, and 402,000 cows. The produce of flax is also very great. This is a distinguished manufacturing province. The woollen branch flourishes more than in any other part of the empire; employing 10,000 looms and 100,000 men, not only in common cloths and flannels, but in kerseymeres and other fine fabrics. The general staple of linen is not less flourishing; employing 26,000 looms, 15,000 weavers, and 200,000 spinners. Cotton also gives employment to 10,000 people; and the hosiery amounts to 200,000 woollen and 140,000 cotton stockings. Moravia and Austrian Silesia, in 1817, contained 1,733,000 inhabitants; of whom 450,000 were of German, and 1,250,000 of Sclavonic race, with 28,000 Jews. By the census of 1825, they had increased to 1,968,000.

The towns of Moravia are considerable. Brunn and Olmutz are both strong fortresses, and barriers of the empire. The former, containing 27,000 inhabitants, is the seat of government, and has extensive manufactures of fine woollens. Olmutz is a great market for Russian and Hungarian cattle. Iglau, an open town, has considerable manufactures, and is the greatest thoroughfare in Moravia. Znaym, the ancient seat of the Moravian princes, is now chiefly supported by its great military hospital. Troppau and Jägerndorf, in Austrian Silesia, are strong and pretty considerable towns.

Subsect. 2.—*Prussian Dominions.*

The German dominions of Prussia are extensive and scattered, variously acquired by successive inheritance and conquest. They consist of Brandenburg, the original basis of the monarchy; of Pomerania and Silesia; and of territories in Saxony, in Westphalia, and on the Rhine.

Brandenburg forms a great mass of territory in the eastern part of the north of Germany, bordering on Poland. It is usually called the Mark of Brandenburg, and comprises the cities of Berlin, Frankfort, and Stettin; containing 15,480 square miles, and 1,926,995 inhabitants in 1827: it is neither the most fertile nor the most beautiful part of this great country. It consists of a vast plain of sand, in some places presenting a dead level, in others blown into hills of little elevation. The grain, though carefully cultivated, is not sufficient for internal supply, but is of excellent quality. Tobacco and flax are cultivated with success. The breed of horses and oxen has been improved; but the pastures are not sufficiently rich for them. Sheep are bred in great numbers on the sand-hills; and their wool, improved by the mixture of the merino, ranks next to that of Silesia. The woods cover a fourth part of the surface, but are chiefly firs and pines, affording excellent masts, with some good oak forests. The manufactures, few of which originally belonged to the district, having been patronised with great zeal by the government, have considerably increased. That of woollens is the most extensive; the next in importance are linens and silk: porcelain and other ornamental fabrics are carried on at Berlin. The inland trade is very considerable, being favoured by the great rivers which pass through the province. The Elbe, indeed, only touches its western border; but its great tributaries, the Elster and the Spree, cross all Brandenburg; and the Oder runs through it from the north. The navigation of these rivers is greatly aided by the canals that unite them.

Berlin (*fig.* 422.), the capital of Brandenburg, and of the Prussian monarchy, is one of the finest cities in Europe; being the recent and studied creation of an absolute monarch, it has been formed upon a regular plan, and on a liberal scale of expenditure. The Brandenburg gate (*fig.* 423.) is considered the most simple and majestic portal in Europe. On the entablature stands a bronze figure of Victory, one of the trophies carried off by the French, but which Prussian victories have now restored to its place. This matchless gate forms the entrance into the Linden-strasse, which, as a street, is perhaps also without a rival. It is divided, by double rows of linden or lime trees, into fine alleys, which afford delightful walks, and along which are ranged edifices of the most majestic and classical character. Among these are chiefly remarked, the palace situated on the Place de Gendarmes (*fig.* 421.), seen along a line of lofty façade,

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Berlin.

Brandenburg Gate.

ornamented with porticoes, statues, and every variety of sculptural decoration; the Italian opera-house, the churches, and the theatre, built with the intention of eclipsing all the other productions of Prussian architectural taste. Mr. Russell, however, complains that there is something monotonous in the design, which is uniformly that of an Ionic portico on a very simple front. The same fault he imputes to the other streets and squares, though they are broad, spacious, and regular. The Spree, which divides Berlin, has only the appearance of a broad ditch, navigated by flat-bottomed boats. On the opposite side is the old town, a scene of traffic, with little pretension to beauty. The population, which in 1726 was only 94,419, had risen in 1827 to 223,520. Out of every hundred, fifteen were military. Berlin is a busy city, carrying on various manufactures of woollen, linen, and particularly silk, with a royal manufactory of porcelain, employing 300 hands, and the products of which have been preferred by some to those of Dresden. There are numerous makers of surgical and mathematical instruments. The trade of Berlin is also extensive, as it communicates by the Spree, and its canals, both with the Elbe and the Oder. An university has lately been founded, which, in 1829, contained 1752 students, and ranks second to none in Germany. This capital has also royal academies of science and the fine arts; a splendid public library; cabinets of natural history; a botanic garden containing 12,000 exotic plants; and a fine picture gallery.

Place de Gendarmes, Berlin.

The other towns of Brandenburg are not of first-rate importance. Potsdam, designed by Frederick the Great as a military residence, is regularly and very handsomely built, with 30,000 inhabitants; yet, according to a late writer, it suggests no other idea than that of a barrack. On every side are seen stiff figures of recruits moving slowly to the marching step, under smart and severe instructors. Frederick's palace of Sans Souci is remarkable for the extreme simplicity of those apartments which were occupied by himself. Frankfort on the Odèr cannot challenge a comparison with its namesake on the Mayn: it is still a considerable town of 15,500 inhabitants, with a strong bridge over the Oder, which is here a broad and spacious stream. It has some manufactures, and a considerable trade, holding five yearly markets, much frequented by the Russians and Poles. Brandenburg, the old capital, is still a city of 12,000 inhabitants. Kustrin and Spandau are little fortified towns, the former of great strength.

Pomerania is a long line of narrow, sandy coast, lying along the Baltic. The Oder here enters that sea, forming at its mouth a large and winding *haff*, or bay, on the opposite side of which are the large islands of Usedom and Wollin. It is divided into the governments of Stettin, Stralsund, and Koeslin, containing a population of 869,986. The soil is in many parts far from productive; yet in others, especially that which formerly belonged to Sweden, it is made by industry to yield harvests of grain more than sufficient for the interior supply. There are few manufactures; but the commodities of Brandenburg and Silesia are brought down the Oder, and exported from Stettin, Stralsund, and other ports. Stettin, the capital, is not only one of the strongest fortresses, but one of the most flourishing commercial cities in the monarchy, containing a population of 25,000, including the military. In 1827, there entered and quitted its port 25,024 vessels, and nineteen were built there. Stralsund, the former capital of Swedish Pomerania, lies in a wide flat territory, separated by a narrow channel from the great island of Rugen, and so enclosed by bays and lakes that it can communicate with the continent only by bridges. It ranked as one of the most celebrated fortresses in Europe, and bade defiance to the utmost efforts of Wallenstein; but the walls are now suffered to go to ruin, and the ramparts are used only as a promenade. The vessels

which entered and quitted its port in 1827 were 6324. Anklam, Stolpe, Wollin, Stargard, and Kœslin, are also ports and towns deserving of mention.

Silesia is an extensive oblong tract between Bohemia and Poland. It was originally a Polish province; but German settlers have now occupied the greater part of it, and introduced industry and prosperity. From its fertility, and the industry of its inhabitants, it is considered the brightest jewel in the Prussian crown. The Oder, rising on its southern border, divides it into two nearly equal parts, of which the western is mountainous or hilly: its population is altogether German, and it is the seat of the principal manufactures; while the eastern consists, in a great measure, of flat and sandy plains, and is partly occupied by Sclavonic races. The principal mountains are the Riesengebirge and the Sudetes, on the borders of Bohemia and Moravia. Of the Riesengebirge, the most elevated summit is the Schneekoppe, 5400 feet high; and though not adorned by lakes, it exhibits very picturesque scenery, which has gained it the appellation of "German Switzerland." Silesia contains 15,600 square miles, and is divided into the governments of Breslau, Oppeln, and Liegnitz, which, in 1827, comprised a population of 2,362,562 persons; the number of inhabitants in 1817 was 1,992,598. Of 12,400,000 acres, excluding tracts altogether naked and mountainous, 6,900,000 are under the plough; yet so great is the population, that it is only in favourable years that the produce of grain suffices for the consumption of the people. Flax is cultivated in a very great quantity; yet still not sufficient for the immense manufacture of which it is the material. Hops, tobacco, and madder are also considerable productions. The live stock that is reared is not adequate to the wants of the country, with the exception of sheep, which, even in 1802, amounted to 2,229,000; and their wool has been brought to such perfection as to be an extensive object of export, in a great measure superseding the Spanish in the market of Britain. Silesia is, perhaps, the most manufacturing country in all Germany; its linens, in particular, are considered the best in the world for pliancy, brilliant whiteness, and durability. In 1805, they employed 35,000 looms, producing in value about 12,000,000 rix-dollars; but Bonaparte's decrees, and the successful rivalry of Ireland and Scotland, have greatly lowered the amount, which is now only estimated at from 7,000,000 to 9,000,000, of which from 5,000,000 to 7,000,000 are exported. About half of the inhabitants are employed in spinning. Yarn is exported; and a great quantity of Bohemian cloth is brought hither to be bleached. The seat of the manufacture is chiefly in the mountainous district, where the numerous streams and the purity of the water are highly favourable to its various processes. The woollen fabric, though less considerable, employs 5500 looms, and is reckoned to produce 5,000,000 rix-dollars. The mineral kingdom is very productive, the returns being 10,000 tons of iron, 2677 marks of silver, besides copper, lead, arsenic, &c. The trade of Silesia consists in the exportation of its manufactures, chiefly by the ports of Hamburg and Stettin, and in the importation of grain and cattle from Poland and Moldavia; of wine from Austria; and of India goods, silk, and cotton, by way of Hamburg.

The towns of Silesia are close-built, well fortified, not very large, but in a thriving state. Breslau, the capital, however, in 1827, contained 87,119 people, besides the military, and is the centre of the whole trade of the province, maintaining intimate communications with Hamburg, Stettin, and Dantzic. It has also a flourishing university, an extensive library, and other valuable collections, and has given birth to many learned men, particularly Garve and Wolf. Schweidnitz was considered of immense strength, and was made by Frederick his chief place of arms during the seven years' war; but when Napoleon obtained possession of it in 1807, he demolished the fortifications, which have never been restored. Glatz, in a beautiful mountain valley, has two castles, both reckoned masterpieces of modern fortification. Liegnitz is less remarkable for its own strength than for the signal victory there gained by Frederick over the Austrian army in 1760. Hirschberg, situated amid the most romantic scenes of mountain Silesia, is crowded in summer with admiring visitants. The other fortress towns of importance are Gross Glogau, on the Oder, and Neisse, on the river of that name, in a marshy country, surrounded by a spacious wet ditch. Brieg and Görlitz are considerable open towns.

Prussian Saxony forms a large extent of straggling territory, consisting of portions severed at various times and in various ways from all the neighbouring states, great and small, sometimes having fragments enclosed within them, and sometimes enclosing within itself fragments of them. Generally speaking, it may be viewed as nearly a square territory, extending on both sides of the Elbe, between Royal Saxony, Brandenburg, and Hanover. It is divided into the governments of Magdeburg, Merseburg, and Erfurt, containing 1,396,240 inhabitants. It belongs generally to the vast, wide, flat plain of northern Germany, though on its western side it borders on the Hartz and the forest of Thuringia. There are considerable sandy and marshy tracts, but upon the whole it is abundantly productive of grain, which is cultivated with particular skill and diligence. Flax and tobacco, with rape and linseed, are also in great plenty. Horses and horned cattle are kept up merely for the purposes of cultivation, but sheep are in number about 1,000,000, and the Saxon wool ranks with the very best in Europe. The mineral wealth is considerable, especially salt, of which a great vein traverses nearly the whole of this territory. The common manufactures of

linen and woollen are generally diffused, without being carried to any remarkable extent. The Elbe, which divides the province into two parts, affords the opportunity of a very active trade. The territory is rated at 10,076 square miles. The inhabitants are almost entirely German and Protestants, this having been at an early period the grand seat of Luther's reformation.

The towns are not generally very large, but numerous, ancient, well fortified, and celebrated in the history of German warfare. Magdeburg, which may rank as the capital, has always been considered one of the strongest places in Europe; and, for its noble defence against Charles V. and Tilly, was regarded as the bulwark of the Protestant cause. Its works are of immense extent, bounded on most of its circuit by the Elbe, and in the rest by a ditch, not wet, but very broad, and carefully undermined. The horrible sacking of Magdeburg by the imperialists, in 1631, is still vividly remembered there, with execrations on the memory of Count Tilly, by whom it was sanctioned. It is a fine old city; the houses large and massive: it has a spacious market-place, adorned with the statue of Otho the Great, and an irregular but very broad principal street. Once a powerful free city, it now contains 32,000 inhabitants, a number of manufactures, and enjoys a considerable trade up and down the Elbe. Erfurt, formerly one of the principal cities, and a central mart, in the north of Germany, has now completely yielded the palm to Leipzig; and, instead of 60,000, contains only about 18,000 inhabitants. It is still a strong fortress, forming the key between Saxony and Franconia. Wittenberg, formerly a distinguished Saxon capital, where the standard of the Reformation was first reared, is now only a small but strong town. Halle is a large city of 21,500 inhabitants, with one of the most flourishing and crowded universities of Germany, and enriched by extensive salt-works in its neighbourhood. Halberstadt is also a large open old town, of 15,000 inhabitants. Quedlinburg was once distinguished for the unbounded wealth of its nunnery, the abbess of which had the principal seat and vote on the bench of prelates; but since 1696 its wealth and privileges have been vastly curtailed. Muhlhausen, Merseburg, Weissenfels, Naumburg, Torgau, Stendahl, Salzwedel, are also considerable towns, of from 4000 to 8000 inhabitants. Lutzen is only a village; but its site is distinguished by the victory and fall of Gustavus Adolphus, the great Protestant hero.

Prussian Westphalia is also an aggregate of a number of small detached parts; but, by cessions and arrondissemens it has been formed into a pretty compact territory, situated between Hanover and Holland, and extending from the Weser nearly to the Rhine. It extends to 8272 square miles, and its three governments of Munster, Minden, and Arensberg contained, in 1827, a population of 1,207,712. The Lippe divides it into two parts; the northern belongs to the great plain, which is sandy and marshy, but affords some good corn-land; the southern is covered with ranges of little rocky hills branching from the Hartz, which render the soil often unfit for the plough, but it is always covered with fine wood. The staple to which Westphalia owes its celebrity consists in its hogs, which surpass those of all the other provinces, producing the hams so much famed throughout Europe. The valuable minerals of iron, coal, and salt are also very abundant. There are extensive manufactures of coarse linen, and a few which produce that of finer quality. Upwards of 20,000 looms were at work in 1816. The trade of the province consists in sending these productions down the rivers to Bremen and Holland; but Prussian Westphalia at no point reaches the sea, or even extends to the Rhine.

The chief towns of Prussian Westphalia are the capitals of its three districts, Munster, Minden, and Arensberg. Munster, once the seat of a sovereign bishop, and too well known from the excesses committed by the Anabaptists during their temporary possession of it, is still a flourishing place, which between 1802 and 1817 increased its population from 12,797 to 18,218. The peace of Munster, in 1648, forms one of the great eras of European history. Minden, celebrated for the signal victory achieved by the British arms in 1759, lies on the Weser, and carries on a considerable trade. A beautiful landscape is here formed by the river, its numerous little tributaries, and a range of wooded mountains, between which the Weser opens the passage called Porta Westphalica. Arensberg, once the seat of a count of that name, and Paderborn, the see of a bishop, were distinguished places in the middle ages, but have greatly declined. Bielefeld is the centre of Westphalian manufacture, especially that of damask, and of other fine linen. In 1811 there were exposed in its market upwards of 2,000,000 ells. In the surrounding meadows seventeen bleachfields employ 450 labourers. There is also a surprising number of little towns, of from 2000 to 5000 people: Rucklinghausen, Kosfeld, Steinfurt, Herforden, Brakel, Wasburg, Lippstadt, Soest, Hamm, Dortmund, Hagen, Iserlon, Altona, and Siegen.

The Rhenish territories of Prussia formerly consisted of two provinces; one bearing the compound appellation of Julich-Cleve-Berg, and the other that of the Lower Rhine, which have recently been incorporated into one province, bearing the name of the Rhine. Its population amounts to 2,168,163.

Julich-Cleve-Berg consists of the three grand duchies of those names, incorporated with the city, and part of the bishopric of Cologne, the Prussian part of Guelderland, the abbacies of Essen and Werden, and a few other small places. It occupies almost ninety miles of the

course of the Rhine, extending on both sides of that river. Of all the Prussian territories, it is the least favoured by nature. On the eastern bank extends a continuous range of mountains, including the remarkable group called the Siebengebirge, or Seven Hills; not, indeed, exceeding the height of 2000 feet, but naked and rugged. The opposite bank is, indeed, level, but consists almost entirely of sandy plains and wide morasses: the country, therefore, does not produce corn sufficient for its own consumption, nor any thing in abundance except flax. Under these natural disadvantages, however, the inhabitants exert a manufacturing industry beyond what is found in any other part of Prussia or even of Germany. The grand duchy of Berg has been called England in miniature, such is the variety of fabrics carried on there. Cloth, metals, and tobacco are worked up in almost every shape, and are exported to the value of 3,000,000 rix-dollars. The consequence is, that this district, so little favoured by nature, is the most populous, in relation to its extent, of any that belongs to Prussia. The area is only 3476 square miles; while the inhabitants, according to Hoffman's table, amounted, in 1817, to 935,040. It carries on a considerable trade along the Rhine and its navigable tributaries, the Ruhr and the Lippe; the Meuse also runs along its western border. The hills, particularly the Siebengebirge, present many peculiarly bold and picturesque sites, as they rear their heads above the river, crowned with ancient castles.

Some fine cities adorn the territory. Cologne (*fig.* 425.) is one of the most ancient in Germany, and till 1797, was an imperial city, and the seat of a bishop, who was once an elector. It still contains above 50,000 inhabitants, and is the seat of a great trade, being the chief medium of intercourse between Germany and Holland. There is a great exchange of wine and other productions brought down the Rhine for colonial and manufactured goods. In 1814, 3039 vessels entered its port. The silk manufacture employs 494 looms, producing in value about 800,000 rix-dollars. The liquor called Cologne water is celebrated, and is sent out to the annual amount of 80,000 or 90,000 flasks. Dusseldorf (*fig.* 426.), long an electoral residence, is one of the prettiest cities in Germany, though its walls serve only for a promenade, and its splendid collection of pictures has been conveyed to Munich. Its spacious squares, its handsome houses, arranged in regular streets, and the fine gardens which surround the city, constitute its attractions. It has also a good deal of trade; and though the population between the years 1787 and 1804 had fallen from 12,102 to 11,844, it has again risen as high as 18,000. Clèves, a much smaller town, is situated two miles from the Rhine, with which it communicates by a canal. The late palace of the grand duke is still surrounded by extensive gardens which are open to the public. Bonn, a well-built imperial city, of 10,000 inhabitants, has a strong castle, now in a great measure neglected. Elberfeld and Krefeld are large and flourishing places; its chief seats of manufacture, Rees, Solingen, Muhlheim, Reuss, Lennep, are also deserving of mention.

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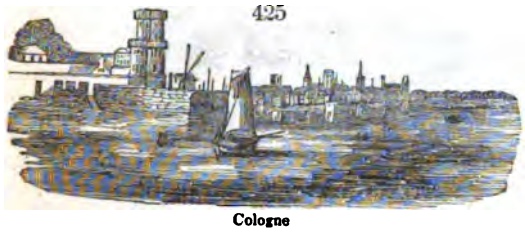

Cologne

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Dusseldorf.

The province of the Lower Rhine occupies a considerably greater extent of the course of the river higher up than that last described. The principal part of it belonged formerly to the archbishopric of Trèves, which, with various little states and cities, has now merged into the Prussian dominion. The Rhine flows through the middle of this tract, receiving on one side the Moselle, and on the other the Lahn and the Lieg. The province is almost wholly mountainous, the principal chains in the west being the Hundsruck, a rocky, calcareous group, widely extended, but not more than 1500 feet high, and from whose sides vast woods overhang the Moselle. The tract of Ardennes also touches the extreme frontier; and on the east, the principal chains belong to the Wasgau. The banks of the rivers are generally planted with vines, and present the most beautiful and pleasing sites that are to be found in any part of Germany. The soil and the climate are very various; but though many tracts are doomed to inevitable sterility, a very great part is under careful cultivation. Rye and oats are the chief grains; but the most characteristic objects are the wines of the Rhine, particularly those of Hockheim (denominated Old Hock), and those of the Moselle and Ahr; they are celebrated over Europe, and from 26,000 to 28,000 acres are occupied in producing them. As a manufacturing district, the present by no means rivals that above described; yet there

is in Aachen, a very extensive fabric of cloths, some of which are exported. These cloths, with wine and wood, form the basis of a considerable trade, independent of the passage of vessels up and down the Rhine. The area is 6332 miles; the population in 1817 was 972,724.

Coblentz is situated at the confluence of the Rhine and Moselle. It is a very ancient city, once the frequent residence of the emperors of the Carlovingian dynasty, and afterwards of the princes of Trèves. It contains, therefore, many fine old edifices, both public and private. During the French revolution it was for some time the residence of the exiled court, and the asylum of the emigrant nobility. The situation is delightful, and it is a considerable depôt for the Rhenish and Moselle wines brought down for embarkation. On the opposite side of the river is Ehrenbreitstein (*fig.* 427.), a small town, on a rock above which stood one of the strongest fortresses in Europe: it was demolished in 1801.

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Ehrenbreitstein.

Of the other towns, Trèves is considered one of the most ancient either in France or Germany, being noticed by the Romans under the appellation Trevirorum Civitas. The inhabitants have even a boastful proverb that "before Rome was, Treveri stood." It was a great city in the middle ages, and contains many superb churches and convents as monuments of its former grandeur; but many of them are now empty, and going to ruin. The place has still 12,750 inhabitants, and a considerable trade with France, and in the wine and wood of the Moselle. Aachen, better known as Aix la Chapelle, is the largest town of the territory, containing a population of 32,000, chiefly employed in manufactures. These consist chiefly in kerseymere and other fine woollens, which occupy 1358 looms, and produce a value of 400,000*l*. The city is also very ancient, having been a residence of the emperors, and the place of their coronation. Being built, however, on an irregular spot of ground, its streets are extremely uneven, narrow, and dirty. Kreuzenach and Saarbruck are also considerable towns, and Saar-Louis is a strong fortress. St. Goar and Bacharach are only villages; but a great quantity of the finest Rhenish wine is brought down to them. Neufchâtel has been noticed under the head of Switzerland.

SUBJECT. 3.—*Smaller States.*

1. *Bavaria.*

Bavaria, next to Austria and Prussia, is the most powerful of all the German states. At various periods the princes of Bavaria have been seated on the imperial throne, and their house even attempted a rivalry with that of Austria; but the disasters of the war of the succession, during which Bavaria followed the adverse fortunes of France, sunk it into a rank decidedly secondary. It obtained, however, a great increase in 1777, on the accession of Charles-Theodore, who brought into it a great part of the upper palatinate of the Rhine. In the beginning of the present century, it obtained a much more remarkable enlargement from Napoleon; who hoped to attach his vassals by aggrandising them, and was finally the dupe of that policy. The elector of Bavaria received from Austria the Tyrol, Saltzburg, and part of Upper Austria; from Prussia, Anspach and Bayreuth. At the downfall of Napoleon, Bavaria was obliged to restore all that had been taken from Austria; but she was indemnified by the territory of the free imperial cities, Augsburg, Nuremberg, Wurtzburg, and others, once great and powerful, whose burghers were princes, and whose almost impregnable walls enabled them to defy the greatest monarchs, but who had sunk under the recent political shocks. The new acquisitions in Swabia and Franconia form a tolerably connected state with Bavaria; but the Rhenish territory is a portion entirely severed from the rest of the monarchy. Bavaria has a mountainous character, produced chiefly by branches of the neighbouring mountain ranges. The Noric Alps, in the south, are the most formi-

dable, and several of their pinnacles rise to the height of 9000 feet. On the northern side, it borders on the Rhenish chain of the Wasgau, on the Thuringian and Bohemian forests. The Spessart, the Steigerwald, and the Fichtelgebirge, are found in the interior of Franconia along the Mayn. Between those mountains there are not only broad valleys, but even extended plains, especially along the banks of the rivers, though a considerable part of these are covered by morasses, overgrown with rank grass, and not yielding even turf. The greatest rivers of Germany water Bavaria: the Danube intersects the chief portion of it; Franconia is traversed by the Mayn, and the Rhenish territory by the Rhine. The Danube receives from the Tyrol important tributaries, the Lech, the Iller, and the Iser. After every deduction, Bavaria is a very fruitful region; but culture is in an extremely unprosperous state. The cultivators are superstitious, and wedded to old habits; and they are so bound down by servitudes, *corvées*, and restrictions originating in the feudal system, as to discourage all their efforts. The legislature, however, has been very anxiously seeking to diminish these burthens, by commuting them for a regular rent or price. There are many fine cornlands, and the wheat of the Danube is very good; but the produce is not, on the whole, sufficient for the supply of the inhabitants. Cattle are extensively reared, and their number is said to exceed 1,000,000: but the breed is little attended to; and, in case of sickness, the husbandmen, instead of applying remedies, lead them in pilgrimage to some favourite shrine. In 1821, there were 30,000 of these cattle pilgrimages. Horses and sheep are fewer in number, and of still worse breed; but the hog, yielding a favourite dish, is reared with very anxious care: in 1794, there were 400,000 hogs in the kingdom. A good wine is produced on the banks of the Mayn, to the extent of 600,000 or 700,000 eimers, of which part is taken off by Saxony. Timber is a national staple, a great part of the kingdom being covered with natural forests; oak and beech on the plains, pine and fir on the mountains. The Bavarian minerals are salt and iron. The salt mines of Ruchenhall, Traunstein, and Rosenheim, produce 40,000 tons; those of Berchtoldsgaden, 15,200 tons. The iron mines yield 32,000 tons. There is also a considerable supply of coal on the Rhine and on the Mayn. The manufactures, which are slender and coarse, are established almost exclusively in the newly acquired free cities. Even linen, the German staple, is in its infancy; but there are quantities of coarse woollens and of cotton goods, almost sufficient for internal supply. There is a great quantity of leather, of very coarse paper, and of fine works in gold and silver: these last chiefly at Augsburg; also a good deal of glass. Bavarian brandy and beer are reckoned excellent. The limited commerce of Bavaria is carried on chiefly by the Danube on one side, and the Rhine on the other. It exports salt, iron, wood, cattle, leather, paper, glass, and wine; receiving in return, colonial produce and fine manufactures of every kind.

In regard to its political and civil state, Bavaria, since 1818, has been a constitutional monarchy. It is represented by an assembly divided into two chambers; the lower contains a representative for every 7000 families. The king is obliged to assemble them only once in three years. The regular army consists of 36,500 infantry, 6400 cavalry, and 3350 artillery. It is raised by a conscription, including all between nineteen and thirty. There is also a strong reserve and landwehr. The population of Bavaria has not been ascertained by any recent enumeration; but from official data, it appears to have been, in 1826, 4,037,017. The numbers were, Catholics, 2,880,383; Protestants, 1,094,633; Jews, 57,000. Bavaria, at least the original territory, has not ranked among the enlightened countries of Germany; yet great efforts are now made to extend and improve the means of education, especially for the lower classes. There are three universities and nine lyceums, but mostly in the free cities and other acquired territories. The collections, however, made by enlightened princes are munificent, and on a greater scale, compared with its resources, than those of almost any other state. The library of 400,000 volumes, contains many valuable manuscripts and early printed works; the picture gallery, chiefly removed from Dusseldorf, is also most splendid; and there are several of both, on a smaller scale, in the other cities.

In regard to local details, the princes of Bavaria appear to have studied to obliterate the former political distinctions, and have distributed the state into eight circles, founded upon its grand natural feature, the rivers. A statistical view of these circles has already been given.

Munich, the capital, lies in an extensive plain, on the Iser; and though it cannot boast any thing which suggests ideas of grandeur, either ancient or modern, it is handsome, and full of well-built modern houses, and public edifices; the streets are broad and well paved. Hassel ranks it among the handsomest cities in Germany. The cathedral of Notre Dame, however, though of vast extent, and with towers 350 feet high, is declared by Mr. Dibdin to be frightful in the extreme, built of red brick, without ornament, design, or expression, and not of earlier date than the fifteenth century. The church of St. Michael, in which the public library is deposited, is more elegant, and its interior is one of the finest in Europe. The palace has also been considered a good specimen of modern architecture. The city, with its suburbs, comprises a population of about 80,000 souls.

There are other ancient, venerable, and important cities in Bavaria. Augsburg (*fig.* 428.), three centuries ago, outshone all the others, being the chief seat both of merchants and nobles. A thousand flags then floated from the castellated mansions and along the almost impregnable ramparts. Augsburg was once the chief seat of painting in Germany, the birthplace of Hans Holbein and other eminent artists, as is still attested by the exterior walls, covered with landscapes and groups of figures, executed in brilliant colours, though somewhat Gothic in design. The streets, like those of other old cities, are narrow and crowded, and the handsomest are in the suburbs, beyond the now-decaying walls. The town-house, however, is the finest in Europe. There is still an extensive and curious library, and a picture-gallery of some value, though many of its best specimens have been transported to Munich. Augsburg is still distinguished for its calico-printing, which, in 1805, employed 6938 persons; for its gold and silver lace; for its mathematical instruments; and for its trade, which employs 2000 houses, and amounts to about 2,000,000*l.* sterling. It has 32,000 inhabitants. Nuremberg, once the boast of the free cities of Germany, and the grand seat of its arts, both useful and ornamental, is now annexed to Bavaria; a change indignantly felt by its ancient and opulent burghers. Its churches and public buildings are still esteemed fine specimens of its ancient art: they are adorned with rich early paintings on glass, and select works by Albert Durer, a native of the town, and others by Sachsens, Behaim, and Pirckheymer. Nuremberg is above all famed for its inventions: those of the watch, the making of brass, copper-plate engraving, the pedal, the musket, the trumpet, the clarionet, are all claimed for one or other of its citizens. The streets are broad, with many fine old houses, but not regularly built. The town-house, and several of the churches, are distinguished, the latter especially, for their paintings in glass. The number of its inhabitants has been reduced from 90,000 to 40,000. Bamberg is also a very handsome and ancient free city, with a castle, once distinguished by its strength, and flourishing university. Wurtzburg is a city of similar character, celebrated as a strong fortress, and possessing an university, the medical school of which is distinguished all over Germany. Schweinfurt was likewise distinguished, during the thirty years' war, as a grand military position. Regensburg, which we call Ratisbon, was a Roman city, and in modern times venerated as the seat of the Germanic diet; the house used for which purpose still remains, but bears few marks of that dignified destination. Its chief ornament is the cathedral, which forms an ancient and noble Gothic structure (*fig.* 429.). The streets are narrow and winding, but clean, consisting of high well-built houses. It suffered severely during the five days' battle in 1809, between the Austrians and the French. It still flourishes by a very extensive trade on the Danube, being the chief intermediate port between Ulm and Vienna. Landshut is a neat small town, with an extensive and very curious library. Nordlingen, only a moderate town, is celebrated in military history for several remarkable battles. Anspach and Bayreuth, once the seat of little courts, still hold a place as the capitals of circles. Passau is distinguished for its antiquity, its romantic site, and the treaty signed there, in 1532, between the Catholics and Protestants.

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Augsburg.

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Ratisbon Cathedral.

2. *Wirtemberg.*

Wirtemberg does not follow Bavaria in the order of magnitude; but we shall here notice it as completing the principal southern states. Wirtemberg occupies the greater part of the circle of Swabia; having Bavaria on the east, and Baden on the west. It is entirely traversed, from south to north, by the Neckar, which, rising in the Black Forest, and flowing due north, falls into the Rhine at Mannheim; and by the Upper Danube, which, rising from nearly the same source, directs its course north-east, till it passes Ulm and enters Bavaria. The mountains nowhere rise to an alpine height: on the western border is the Black Forest; but none of its branches within Wirtemberg reach above the height of 3000 feet. There is no part of the kingdom to which the name of plain can apply; but there are very broad and productive valleys; rendering Wirtemberg, on the whole, one of the most fertile countries in Germany. It is reckoned to contain 1,840,392 acres of arable land, 620,477 pasture,

79,296 of vineyard, and 1,735,466 woodland. The produce of grain of every kind, including maize, is computed at 6,000,000 bushels; of wine, 160,000 eimers: apples, pears, potatoes, and garden stuffs are plentiful and excellent. The rearing of cattle, with that of sheep, holds a very prominent place in the agriculture of Wirtemberg, and has lately been much improved both by new breeds and by artificial grasses and stall-feeding. In horses, hogs, and bees, this country is below the general level of Germany. Geese are reared in surprising numbers, and are sent even to Vienna and Italy. The extensive forests are valuable not only by their timber, but for producing cherries and several kinds of berries, which are a considerable resource to the poor as food, and from which spirituous liquors are extracted. The mines consist chiefly of iron, to the extent of 3000 tons, and of some salt. The manufactures are limited: they consist chiefly of linen or woollen, carried on by the rural population for home use. There are, however, 104,000 incorporated tradesmen. The commerce is brisk. The export consists in a large quantity of cattle, some grain and timber, some coarse woollen and linen stuffs, and manufactured tobacco. The returns are in colonial goods, cotton, silk, and other manufactures. The government is now the most decidedly constitutional of any in Germany; the nation being represented by states, which assemble every two years, are freely elected, and enjoy all the attributes proper to such institutions. The king of Wirtemberg has always been the most intractable in regard to the arbitrary measures of Austria and the Diet. In no country is there a more general diffusion of knowledge. It has one flourishing university; and its schools and seminaries of other descriptions are said, by Hassel, to be more numerous than in any other country of the same dimensions.

Wirtemberg is divided into four circles, marked by natural features. 1. Circle of the Neckar, comprising the course of that river, the finest part of Wirtemberg. 2. Circle of the Black Forest, being the territory covered by that range of mountains. 3. Circle of the Danube. 4. Circle of the Jaxt, deriving its name from a small river of that name, and occupying the north-eastern part of the kingdom.

Stuttgart, the capital, is situated on an extensive plain, 700 feet above the level of the sea, and surrounded on three sides by mountains. It is described as large and dull; but the streets are broad and well paved, especially the principal one, called the Königstrasse. In its nine squares and eighty-seven streets there are a number of handsome houses, and the new royal palace is elegant; but there are no monuments of antiquity, no objects calling up any grand historical recollections. There is, however, a library of 200,000 volumes, including 12,000 bibles, and a celebrated gymnasium, attended by 545 scholars. The manufactures and trade are of little consequence. Population 82,000.

Among the other cities, Ulm, in the circle of the Danube, may take the lead. This once great imperial city is happily situated in an exceedingly rich and beautiful plain, at the point where the Danube, swelled by the Iller and the Blau, becomes a great navigable stream. It retains, however, but a shadow of its once extensive industry, chiefly in linen manufactures, which now employ only 300 persons. The houses are built in the old German style, with high gables; the streets are irregular, but well paved. The chief ornament of Ulm is the cathedral (*fig.* 430.), one of the grandest structures of the kind in Europe. It is described by Mr. Dibdin as "English-looking;" broad, bold, and lofty, in a massive and imposing style of architecture. It is 416 feet long, 160 broad, and the tower 337 feet high. The interior is very noble, and adorned with many pictures of the old German masters. Ulm derives a dark celebrity from the overthrow and surrender of the Austrian army, under Mack, in 1805. There are still remains of the strong walls by which it was once defended. Halle is another free city of Swabia. It is strongly fortified, and its town-house and the cathedral of St. Michael are greatly admired. There are very extensive salt-works, yielding 5000 tons of rock salt; also a trade in corn, cattle, and wood. Heilbronn is a strong little town, situated on the Neckar, in a fine wine country, and carrying on some branches of industry. Ludwigsburg, pleasantly situated on the same river, is the occasional residence of the royal family. Tübingen, in the Black Forest, contains the national university, with five faculties, attended by 557 students.

Ulm Cathedral.

3.—*Grand Duchy of Baden.*

The grand duchy of Baden consists of the long valley of the Rhine, from Basle to Mannheim, sloping down from the Black Forest, which borders it like a ring. Its surface, of nearly 6000 square miles, contains no plain, but a number of broad fine valleys subordinate

to the great valley, among which the Murgthal and the Kinzigthal are the most important. The mountains of the Black Forest nowhere rise much above 4000 feet, and their heads are not covered with snow more than half the year: they abound, as their name implies, with dark and majestic woods. The soil in the lower valleys is everywhere fertile in the extreme, and the richest pasture covers the sides of the hills. The Danube rises from three springs near Donaueschingen, but leaves the territory while yet little more than a brook. Of far greater importance is the majestic circuit made by the Rhine along the whole southern and western border. The lower course of the Neckar also flows through Baden; and numerous small but fertilising streams descend from the Black Forest into the Rhine. Grain is produced so abundantly as to afford a surplus for exportation: the wheat yields a very fine flour, to which we may add the finest hemp in Germany, and excellent tobacco. Pulse, flax, and hops are less productive. Fruits are very abundant, though not in the same vast profusion as in Wirtemberg. The vineyards along the Rhine and the Neckar are extensive, and enjoy a high reputation; but the produce of the territory on the Lake of Constance, or Bodensee, called see-wine, or lake-wine, is much less prized. The number of horned cattle is great, amounting to 400,000 head; and the hogs are estimated at 194,000: but horses and sheep are not reared with the same success. Although the range of the wild animals has been much diminished, yet, in the recesses of the Black Forest, the wild hog, the stag, and the fox, affbrd still too much scope for the amusement and occupation of hunting. The forests of noble trees afford a most valuable commodity, of which a great quantity is sent down the Rhine to Holland. The mines of silver, copper, iron, and salt are pretty considerable; none of them very great. The manufactures are but of very limited extent, though they include many fabrics of wood, particularly clocks, to the great number of 107,000; also 51,000 dozen of metal spoons. Linen employs about 10,000 persons. Baden enjoys a great transit trade, from its situation along the Rhine and on the frontiers of Germany, France, and Switzerland; it has also a regular trade in the export of its own wood, wooden clocks, fruits, grain, and wine. Mannheim is the chief emporium.

The population of Baden was found, in 1819, to be about 1,100,000; and it had increased in 1832 to 1,201,000, notwithstanding considerable emigrations to Russia and America. There are supposed to be about 800,000 Catholics, 380,000 Evangelicals, and 15,000 Jews. Since 1817, Baden has had a representative constitution nearly similar to that of Bavaria and Wirtemberg. The revenue may amount to between 5,000,000 and 6,000,000 guilders; but it is burdened with a debt of 20,000,000. The standing army is from 8000 to 10,000, with about an equal number of landwehr; to which may be added the landsturm or levée en masse, which may amount to about 100,000. The establishments for education have recently been very extensive: there are two universities, four lyceums, and thirteen gymnasiums.

Carlsruhe, as a capital, is small, being supported almost entirely by the residence of the court, and of the gay and wealthy classes of society, whom that residence attracts: this gives it a very lively aspect; yet though it contains many good houses, and thirteen which rank as palaces, its aspect, according to a late traveller, is only that of a very large and handsome country village. It has a fine lyceum, and several scientific collections and establishments, though not on a very great scale.

Baden possesses other equally important cities. Mannheim, at the junction of the Neckar and Rhine, is reckoned one of the finest in Germany; but it seems agreed that it is too mathematically regular, all the streets crossing each other at right angles, and every house being of the same height. An extensive and strong castellated palace extends along the Rhine, and contains a handsome collection of antiquities, casts, drawings, paintings, with remains of the ancient library, amounting still to 70,000 volumes. Heidelberg is one of the most ancient cities of Germany; and above it the ancient palace of the electors palatine still frowns, a huge majestic pile; though the mass of its walls lies in fragments in the ditch beneath. Its cellars still contain the famous and enormous Heidelberg tun, capable of holding 500 pipes of wine, but now empty. The most ancient German university, founded in 1386, still flourishes under royal patronage, and has 820 students. Philipsburg, once among the strongest fortresses of Europe, has been dismantled since 1802. Rastadt, famous in the annals of diplomacy, is only a small country town. Baden, encircled by seven lofty fir-clad hills, attracts strangers by the beauty of its situation, and still more by its warm baths, which make it at once the resort of the sick, the fashionable, and the gay. Kehl, opposite to Strasburg, is an important military position. Freiburg, a considerable town, in the heart of the Black Forest, has a well-endowed university. Constance, situated on the lake of the same name, where the Rhine issues from it, has a little trade and shipping, raises a great deal of pulse and vegetables in its suburbs, and in its vicinity a good deal of indifferent wine.

4.—*Kingdom of Saxony.*

The kingdom of Saxony now consists of a much diminished part of the former possessions of that great house, which once held the chief sway in northern Germany. The policy of Napoleon, indeed, raised it to a greater magnitude than it had ever before possessed, by annexing part of the Prussian territory, with a considerable portion of Poland, under the

title of the duchy of Warsaw. But of all these acquisitions Saxony was stripped, in consequence of her adherence to Napoleon at the time of his downfall. The kingdom now consists of the plain of the Elbe, extending along its course for about a hundred miles after it forces for itself a channel through the mighty rock wall of the Erzgebirge, which separates it from Bohemia. On this line it receives several fine tributaries; the Mulda and the White Elster from the west, the Black Elster from the east. The eastern borders of Saxony are watered by the Neisse and the Spree: on its frontiers are several chains of mountains: the Erzgebirge on the south, a rich metalliferous range; the Riesengebirge in Swabia; the Vogelberg and Thuringian forest in the west. The central plain is fertile, and the most thoroughly well cultivated in all Germany; notwithstanding which it cannot fully supply with bread the dense manufacturing and mining population. A great part of the surface also is covered with flocks of sheep, to the number of 1,300,000, the wool of which has been raised to high perfection by the introduction of the merino breed. The woods are extensive; but, since the loss of the vast forests of Lusatia and Thuringia, they are not adequate to the supply of the mines and manufactures. The mining operations, though in the hands of government, are conducted with a science and a diligence not equalled in any other part of the world. Their products are, silver, 48,000 marks; lead, 10,400 cwt.; cobalt, 8900; tin, 2400; copper, 600; iron, 24,000 tons. Saxony surpasses all the rest of Germany in manufacturing industry, which is supposed to occupy three-fifths of the inhabitants. The staples of linen and woollen are both considerable; but it is in cottons that this country excels all the rest of Germany. Hassel hesitates not to assert that the Saxon ginghams and muslins are equal in every respect to the English, and that, if they cannot support the competition, it is only because the latter are more slight and showy. There is a great deal of paper manufactured, and printing is conducted upon a large scale. The metals of Germany are smelted with the same skill with which they are extracted; and the porcelain of Dresden and Meissen rivals that of China. The commerce of Saxony is particularly active, not only in its own productions, but as it contains in Leipzig the grand centre of all the commercial movements of Germany. The whole book trade of this vast country is carried on there; independent of which, the other goods brought to its three fairs are estimated at 18,000,000 rix-dollars. The trade of Leipzig, and of Saxony in general, is carried on chiefly by wagons, though a good deal also goes along the Elbe.

The population of Saxony, in 1828, was rated at 1,400,000. Lutheranism, which was first established here, is almost universal, there being only 40,000 Catholics; though, by a singular anomaly, the king himself is of that persuasion, and has obtained, since 1811, complete equality for those of his own creed. The diffusion of knowledge is general; but there is only one university, that of Leipzig: the schools are said to be on a contracted scale, and the attempt to improve them has been hitherto ineffectual.

Dresden (*fig.* 431.), though not one of the largest, is generally reckoned the most elegant of the German cities: it has even been called the Florence of Germany. It is almost unrivalled in situation, the country around presenting a mixture of romantic natural scenery, with the richest possible cultivation. The banks of the Elbe are on one side abrupt, rocky, woody, picturesque; on the other, they swell into graceful and verdant eminences. The streets of the old town are somewhat narrow, but bordered by many lofty palaces of the Saxon nobles, built in a simple and austere style of architecture. The royal palace is of great extent, and contains many elegant features; but these are so various and scattered, as to produce nothing striking as a whole. The new town, on the opposite bank, is built in a lighter and more regular style, and has one very fine street; but it cannot vie with the magnificence of the opposite city, which remains still the seat of the court and the fashionable circles. The stone bridge, of eleven arches, over the Elbe, is the finest structure of the kind in Germany. Dresden is illustrious for its collections in literature and the arts. The royal library is one of the first in Germany, and the picture-gallery has no rival on this side of the Alps. There is also an immense and valuable collection of prints, of casts, and of antiquities. Population 60,000.

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Dresden.

Among other towns is Meissen, a little city, above the Elbe, which gives name to the circle, adorned with a handsome cathedral, and a ducal castle, majestically seated on a rock of granite. It is now converted into the royal manufactory of porcelain, producing the finest specimens of that article in Europe. Freyberg, the capital of the mining district in the Erzgebirge, the scene of the most extensive mineral operations, is rendered illustrious by the residence and instructions of Werner, the founder of the modern school of mineralogy. Chemnitz, which may be held as the manufacturing capital of the same district, employs 1600

looms in linen and cotton, and makes 50,000 dozen stockings. Bautzen, or Budissin, the capital of Saxon Lusatia, is a well-built and flourishing town, carrying on a great variety of manufactures, stockings, gloves, hats, woollen cloth, &c. Zittau is also considerable, as being the centre of the yarn and linen trade. Königstein, on a high rock over the Elbe, deserves notice, as the strongest fortress of the monarchy.

Leipzig, or Leipsic, claims distinguished notice, as the grand centre of commerce, not only for Saxony, but for all Germany. The scene which it presents of bustle and business, though familiar to an English eye, has no parallel on the Continent. "Such mountains of wool-packs, such firmaments of mirrors, such processions of porters and carters, are to the German a new world." In its structure, it presents a mixture of the old and new style of building, which is singular, but not unpleasing. The whole wears an air of comfort and substantiality, which accords with the character of the place. The surrounding country is fertile and well cultivated, but flat and monotonous. It has, however, been the scene of some of the most signal events in European military history. Here Gustavus Adolphus gained that signal victory which turned the tide of fortune in the great Protestant war; and at Lutzen, not far distant, he fell, crowned with victory. A number of unhewn stones, standing horizontally, mark the spot, on one of which is rudely carved, "Gustavus Adolphus, king of Sweden, fell here, for liberty of conscience." This "stone of the Swede," as it is called, though in a field by the road, has remained untouched. Round and in Leipzig, too, was fought that mighty battle which liberated Germany, and drove Napoleon beyond the Rhine. The inhabitants, who call this "the battle of the people," have carefully preserved the traces of the cannon and musket-balls with which the buildings were struck. Leipsic has 41,000 inhabitants.

5. *Hanover.*

The kingdom of Hanover, which, for more than a century, has been an appendage to the crown of Great Britain, occupies, with some intervals, the whole north-western angle of Germany, from the Elbe to the frontier of Holland. The Hartz, a long chain of detached mountain masses, extending for more than 100 miles along its southern border, is covered with extensive woods, and rich in mines. Its highest pinnacle, the Brocken, does not fall within Hanover; but there are several heights somewhat exceeding 3000 feet. The rest of the kingdom forms the commencement of that immense plain which extends across Europe to the Urals, or mountain boundary of Asia. This plain consists of a continuous basis of sand, interspersed with blocks of granite, which seem to have been carried thither by some ancient revolution of the globe. The land, where it is brought under cultivation, is only an expanse of heath and gloomy pine. The only fertile tracts are along the banks of the rivers, and on the flat coast of the sea, where artificial mounds have rescued from its ravages an expanse of very rich meadows. The country has the Elbe for its eastern boundary, and is traversed by the navigable streams of the Ems, the Weser, and their tributaries; so that it enjoys great advantages for trade. The disadvantages of nature are not redeemed by human diligence to the same degree as in some other parts of Germany. It is true, that in Göttingen, Hildersheim, Grabenhagen, and some of the marshy tracts redeemed from the rivers and from the sea, both skill and diligence are displayed. But others, as Luneberg, Hoya, Osnaburg, &c., which might at least be greatly improved, are left a dreary and savage waste, the inhabitants preferring to hire themselves as servants to the Dutch. After all, grain is raised sufficient for internal consumption, and cabbage and other vegetables more than sufficient. Great quantities of flax are reared for its linen manufactures. With respect to live stock, Hanover is only distinguished for its hogs, which possess a peculiar excellence, rendering Westphalia hams famous over the globe. The supply of timber is large, and in some provinces there is great abundance of turf. The mines of the Hartz are very valuable, being in annual amount about 2,000,000 rix-dollars; of which silver averages 410,000; lead, 258,000; copper, 44,000; iron, 395,000; brass, 94,000; zinc, 45,000; salt, 548,000; and some coal. Coarse and household linen is the staple manufacture, to which is added some fine linen, and a good deal of sailcloth. Brewing, which was formerly very extensive, is now much fallen off, and distillery has sprung up in its stead. The commerce for which this part of Germany is favourably situated has been chiefly engrossed by the Hanse towns of Hamburg and Bremen; while most of the interior trade passes by Brunswick. Emden, in East Friesland, is almost the only port from which there is any foreign trade; while the wagon traffic passes chiefly through Luneburg and Munden. The population of Hanover amounted in 1828 to 1,550,000. It was occupied by Bonaparte during the war; and, on its restoration, in 1815, was erected into a kingdom, a name, perhaps, necessary, instead of the lost title of electorate; but as the sovereign, since 1714, has held his seat in London, the immediate rule is by a regent. The government, in 1815, also received a constitutional form; and states were organised: they are composed of 101 deputies, of whom 10 are prelates, 49 nobles, and 42 deputies from the cities. It has been remarked, however, that this representation is not on the most liberal principle, being confined to the nobility and the corporations, and excluding almost entirely the body of the peasantry. Each of the numerous and once separate districts of which Hanover is now composed, has also a constitution of its own, and peculiar modes of administering justice.

Among the cities, Hanover, the capital, is a plain, ordinary town, situated in the midst of the wide sandy plain, and neither very large, nor containing any thing very remarkable. It is supported by the residence of the court and military, and the occasional assemblage of the states; and, notwithstanding the close connexion with England, English manners have not made much progress. There is a library and collection of paintings, but both on a small scale. Göttingen possesses a greater interest, as the seat of the principal Protestant universities of Germany, supported by the Hanoverian government with an almost unrivalled liberality. The number of students amounts to 1200: it was formerly the ambition of every German youth to study at Göttingen, and of every German *savant* to be one of the professors. But it is now surpassed in reputation by some of its rivals. The library of nearly 300,000 volumes, is one of the most useful in Europe, being supplied with plain editions of all new works of importance, without any expenditure incurred for show and ostentation. The professors amount to forty, with a number of private teachers and tutors. Luneburg, on the Ilmenau, where that river is navigable for vessels of sixty or seventy tons, has a pretty brisk trade, especially by land, employing 70,000 horses and forty wagons daily. Munden, at the junction of the Weser, Fulda, and Werra, receives annually 600 vessels into its port. Clausthal is an industrious manufacturing place.

6. *Electoral Hesse.*

Hesse-Cassel is a smaller state than those hitherto described, comprising only 4350 square miles, with a population of about 650,000. It borders on Saxony, Hanover, Bavaria, and a crowd of little states. The country is almost entirely filled with hills and woods, presenting a very picturesque aspect; though, of the principal ranges, the Thuringian forest does not rise above 3500 feet, nor the Fulda range above 1500 feet, but both are covered with extensive forests. The Fulda and Werra, tributaries of the Weser, are the chief rivers, though it touches also on the Mayn. The land is cultivated with diligence, but not in an enlightened or improved manner, being too much subdivided among a poor peasantry. It yields grain, however, somewhat beyond its own wants, with large quantities of flax and a profusion of valuable wood. It has 363,000 sheep, and 139,000 hogs. The produce of the mines is considerable, especially iron, with some silver and copper. The only flourishing manufacture is that of coarse linen, which is generally diffused throughout the district. Hesse carries on little trade beyond the export of the articles already mentioned, but it is situated on the passage between the inland trade of southern and of northern Germany, on which it is thus enabled to levy considerable tolls. Hesse-Cassel, which formed the central portion of Jerome Bonaparte's ephemeral kingdom of Westphalia, has now been restored to the elector, who represents the ancient powerful and warlike landgraves of Hesse-Cassel. The new constitution of 1831 establishes a popular representation. The revenue is about 4,000,000 guilders. The army consists of 18,000 men, of whom 2000 are in regular pay; the rest are only called out during part of the year. Hesse no longer carries on that extensive traffic of mercenary troops, which formerly brought in large sums of money, and rendered the elector, perhaps, the richest individual in Europe.

Among the cities, Cassel, the capital, is divided into two parts; of which the old town, extending along the Fulda, exhibits, in the extreme, all the defects of old German cities; yet it is still the scene of traffic. The new town, built in a higher situation, is one of the most elegant in the empire: the Königsplatz, of an oval form, with six streets branching from it, is said to be finer than any other of its squares. The palace, seated on a delightful terrace, and the museum, are also fine edifices. There is a library of 70,000 volumes, a fine gallery of paintings, and some other interesting collections. Two miles from Cassel is Wilhelmshohe, an Ionic palace, with a long, lofty, simple front, very beautifully situated on the slope of a wooded hill. Its water-works display great taste and variety. Hanau, at the junction of the Mayn and the Kintzig, is a large, well-built, open town, carrying on a considerable trade. Fulda is an agreeable city, finely situated on the river of that name, over which there is a handsome stone bridge.

7. *Grand Duchy of Hesse.*

Hesse-Darmstadt, called the Grand Duchy of Hesse, is composed of two portions reaching along the Rhine from the Prussian to the Bavarian frontier. It is entirely enclosed by the Odenwald, and other mountains of this part of Germany, not lofty, but steep and wooded. The broad valley of the Rhine, however, with others branching from it, enclose a great extent of fertile territory, very productive, especially in wine, of which 64,000 tuns, according to Hassel, are annually produced; but oats are the only grain for which its high tracts are suited. Besides the Rhine, this duchy includes the lower part of the course of the Mayn, and even touches the Neckar. In addition to the above productions, tobacco and flax are raised in considerable quantities; and the hills are covered with large herds of cattle. There is a little copper, iron, and salt. The population is estimated at 720,000, of which 200,000 are Catholics. Hesse-Darmstadt has a constitution, which, after some difficulty, the grand duke

was prevailed on to make sufficiently liberal. The revenue is about 4,000,000 guilders; and the army, independent of landwehr, amounts to 8000 or 9000 men.

Among the cities, Darmstadt, the capital, is not the most remarkable, though it is handsome and agreeable, with 15,400 inhabitants, a splendid opera-house, and a library of 90,000 volumes. Darmstadt derives much greater lustre from Mentz, or Mayence (*fig.* 432.), that

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Mentz.

great imperial city, formerly the residence of an electoral bishop, which is now annexed to its territory. The fortifications of Mentz, which are of immense strength and extent, have been put in repair, and are now held by the diet as one of the great bulwarks of the empire. The troops of Austria and Prussia, therefore, occupy the forts in front of Mentz, and those of Cassel on the opposite bank; while the duke governs the interior of the town, which has 26,800 inhabitants. The Rhine is here crossed by a bridge of fifty-two pontoons. Mentz has now few manufactures, but a very considerable trade in wine and colonial produce. Worms, another once great imperial city, exhibits only the ruins of its former state, and is almost choked with rubbish, the fruit of successive desolating wars. It has still the remains of some fine edifices, and a good fruit and corn market. Offenbach, a thriving little town, is the only place in the duchy where manufactures flourish.

8. *Smaller States.*

A variety of little states and principalities are clustered in different parts of the north and west of Germany. These, in extent, and even in revenue, are often inferior to the estates of English nobles even of a secondary class; yet the petty princes by whom they are ruled maintain all the form and state of sovereigns. They have states, ministers, an exchequer, a public debt, an army, all in miniature. Yet, small as these princes are, circumstances have occurred to draw them into considerable notice in the eyes of Europe. Several, in the absence of wealth and power, have endeavoured to distinguish themselves by personal merit, and particularly by military talent: Brunswick and other houses have produced some of the greatest European generals. The obligation, also, imposed upon the British royal family, of marrying only into Protestant houses, with the inconveniences which might be produced by an alliance with the great monarchies, has caused these smaller houses to be almost invariably resorted to when a matrimonial alliance was projected. Several of them have given queens to Great Britain; one of the smallest, but for a recent fatal event, would have given a matrimonial king. Similar connections have been formed with Russia and other northern courts.

The grand duchy of Saxe-Weimar, must rank with the small states, though it takes the lead among them. It stands chiefly upon the Thuringian forest, and is diversified with wooded hills of various height, form, and aspect. The soil is in many parts ungrateful, but is diligently cultivated, though by a poor peasantry, and in too minutely divided portions; notwithstanding which, it yields corn more than is sufficient for its own supply, and breeds sheep with very highly improved wool, which, under the name of electoral, is in request even in England. But the glory of Weimar consisted in its intellectual eminence, which for a time rendered it the literary capital, the Athens, of Germany. While the other princes disdainfully neglected men of learning, or confined their patronage to the French, the grand duke of Saxe-Weimar, by extreme liberality and courtesy, drew round him all the great men by whom the annals of German literature have been illustrated during the last half-century. Wieland, Herder, Schiller, Göthe, and a crowd of secondary name, have, successively or together, made Weimar their residence. Weimar is little more than a spacious village, with scarcely a regular street, and but 10,000 inhabitants. Only the palace and house of assembly can be called spacious edifices. It has, however, a library of 120,000 volumes, liberally thrown open to the public. Every degree of freedom is given to the press that the great monarchs will allow; but to them the press of Weimar is an object of continual jealousy. The grand duke, the most liberal and popular of all the German princes, was the first to give to his subjects a representative constitution: yet so well were they before satisfied with his government, that attendance on the states was considered by some as an unnecessary burden. Jena, a small town, is distinguished by one of the most flourishing universities of Germany, and as the theatre of the great battle which overthrew for a time the Prussian monarchy.

Mecklenburg is a territory of the most northerly part of Germany, north-east of Hanover, and bordering on Pomerania, of whose character it in a great measure partakes. It consists to a great extent of lake and forest; and the cultivation is comparatively rude; yet a variety of gentle hills gives it a picturesque aspect. It is divided into the two grand duchies of Schwerin and Strelitz; the former is much the more extensive; and Schwerin, the capital, is a pretty considerable town, with a handsome palace, situated on a lake, and containing a good gallery of pictures. Rostock is a larger town, with 20,000 inhabitants, situated on the Baltic, and exporting grain to the value of from 150,000*l.* to 200,000*l.* Mecklenburg-Strelitz is exceedingly small, not containing quite 85,000 people, and its capital being little more than a large village, which has given two queens to Britain.

Brunswick is the appendage of one of the greatest and most ancient houses of Germany, that of Guelf; whose head, Henry the Lion, contended with the house of Swabia for the empire, but was worsted, and put under the imperial ban. Since that time, the Guelf family has held only a secondary place in Germany. The branch of Brunswick-Luneburg, however, has risen to the dignity, first of electors of Hanover, and then of kings of Great Britain. That of Wolfenbüttel hold only the small domain called the duchy of Brunswick. It is rather a productive territory, situated partly on the declivities of the Hartz, partly on the plain of Saxony. The city of Brunswick is larger than in proportion to the state, containing a population of about 30,000. It is a considerable seat of the inland trade of Germany, its fairs ranking next to those of Frankfort and Leipzig. The government was nearly absolute till very lately, when the people, by a violent change of dynasty, effected for themselves a representative constitution.

Branches of the house of Saxony, once the ruling family in northern Germany, hold a cluster of small principalities to the west of Saxony royal. Saxe-Coburg-Gotha has been lately formed by the union of these two branches, on the extinction of that of Gotha. It comprehends a great part of the territory of Thuringia, and is rather productive. The city, containing about 12,000 inhabitants, is the channel of a considerable trade connected with the fair of Leipzig. It is somewhat a learned city; containing a library of 60,000 volumes, with valuable manuscripts. Saxe-Coburg is a mountainous territory, comprising part of the Thuringian forest. It contains good pasturage, and some valuable mines. This territory has been raised to distinction by the good fortune of one of its younger members, now king of the Belgians. Saxe-Meiningen-Hildburghausen, on the Werra, is a little tract, enriched by mines of salt at Salzungen, and by some of coal, iron, and cobalt. Its principal towns are Meiningen and Hildburghausen, with about 5000 inhabitants each. The little duchy of Saxe-Altenburg consists of two detached portions, separated from each other by the territories of Saxe-Weimar and the Reuss princes. The capital, Altenburg is a considerable town with about 12,000 inhabitants.

Oldenburg is distinguished by the high rank of its princes, connected by family alliances with all the great powers of the north, particularly Russia. The duke has possessions in different parts of the north of Germany; but the main part of them is situated on the Weser, to the west of Hanover; a flat, marshy district, but abounding in rich pastures, and somewhat resembling Holland. The capital, Oldenburg, contains 8000 inhabitants.

Nassau is a dukedom, which, by the union of the territories held by several branches of the same family, has attained to some tolerable magnitude. Situated in the southern part of Franconia, forming a hilly country on the banks of the Rhine and the Mayn, it produces those valuable wines, old Hock and Bleschert, which distinguish this part of Germany: it does not contain, however, any towns of importance. Wiesbaden, the capital, much visited on account of its 15 warm springs, has a population of 8000. At Niederselters, two million bottles are annually filled with the celebrated Seltzer water. Langenschwalbach and Schlangenbad are equally noted for their mineral springs; and Hochheim, Rudesheim, Johannisberg, and Asmannshausen, for their fine wine.

The other principalities are all very small. Anhalt, on the Elbe, between Saxony and Brandenburg, has its population of 136,000, divided between the three branches of Dessau, Bernburg, and Cothen. The family is ancient, and has produced some men of eminence. Schwartzenburg, a district of Franconia, has 112,000 people, divided between the two branches of Sondershausen and Rudolstadt, both of great antiquity, and deriving more importance from their great estates in Bohemia and other parts of the Austrian territory. Reuss, in Upper Saxony, has 83,000 inhabitants, divided between the elder and younger branches. Lippe-Detmold and Lippe-Schauenburg are situated to the south of Hanover; the one hilly and wooded, the other flat and fertile. A former prince of Lippe-Schauenburg made a distinguished figure in the service of Portugal. There are two princes of Hohenzollern, Sigmaringen and Hechingen, having between them 54,500 people. They form the only petty states in the south of Germany, being situated in Swabia, between Baden and Wirtemberg. Waldeck-Pyrmont, composed of two hilly counties between Hesse and Hanover, derives almost its sole importance from the mineral baths of Pyrmont, which are among the most celebrated in Europe. Hesse-Homburg is a small mountainous principality, near Frankfort, possessed by a branch of the family of Hesse-Darmstadt. Though, by the

favour of the house of Austria, its possessions have been tripled, they do not exceed those of a rich English squire. Homburg, the capital, is a small town, in a very picturesque situation. The little principality of Liechtenstein, a district in the Saxon Erzgebirge, has only 5500 inhabitants; but the prince, as an Austrian nobleman, is one of the most opulent individuals in Europe, and his family distinguished by information and intelligence. The Lilliputian lordship of Kniphausen was recognised as an independent state, by an act of the diet, in 1826. It is situated within the territories of the duke of Oldenburg.

The four free cities of Germany, Hamburg, Lubeck, Bremen, and Frankfort, form still an interesting feature, necessary to close the picture of this great country. They are the sole remnant of the Hanse Towns and imperial cities; illustrious confederacies, which, during the middle ages, acted a most conspicuous part in the improvement of the European system. The members of the congress of Vienna, though little friendly to any thing republican, considered these so fully established, and so venerable by antiquity, that they sanctioned them as a part of the Germanic body.

Hamburg is the most important commercial city of Germany. It forms the commercial emporium of Saxony, Bohemia, and other fertile and industrious regions watered by the Elbe and its tributaries. It is, at the same time, a grand medium of communication between the northern and middle states of Europe; and a species of depôt for the commodities of each. The city is of great antiquity, having been founded by Charlemagne, as a bulwark against the rude northern tribes, by whom it was repeatedly sacked, particularly by the Vendes, in 1002. Its advantageous situation, however, enabled it always to recover and extend its commerce, till, in the middle of the thirteenth century, it concluded with Lubeck a treaty, which became the basis of the celebrated Hanseatic league. It continued in a state of uninterrupted advance, while other members of the confederacy declined. In 1618 it was declared a free imperial city, and in 1768 was emancipated from all remnant of dependence upon Denmark. In 1807, however, a period of deep calamity commenced; it was forcibly occupied by the French troops, and Bonaparte seized on a part of the public treasure. He caused a still more deadly injury by the enforcement of the continental system, by which the mercantile interests of Hamburg were reduced almost to a state of ruin. She suffered also severely in 1813, by a premature attempt to effect her liberation: but, on the downfall of Napoleon, she was restored to all her rights. Since that time she has greatly revived; though her previous losses, and the depression generally affecting the commercial interests of Europe, have prevented her from regaining all her former importance. In 1835, 2204 vessels entered the port of Hamburg; of which 884 were from Great Britain; 406, Holland; 40, United States, &c. The leading articles of importation in 1830 were coffee, 35,000,000 lbs.; cotton, 16,000 bales; tobacco, 2538 hogsheads; rum, 3483 puncheons; pepper, 690,000 lbs.; tea, 8800 boxes. (*M'Culloch's Dict. of Commerce.*) The total exportation from Britain to the Hanse towns, most of which goes to Hamburg, is from 7,500,000*l.* to 9,000,000*l.*; from the United States, $800,000. The manufactures of Hamburg are various, though none very considerable, except the refinery of sugar, which has also declined from the importance which it possessed at the beginning of this century.

Hamburg is not a well-built town; the streets being in general narrow and irregular, the houses constructed of brick or wood. The churches of St. Michael's and St. Peter's have elegant spires, and the new exchange is handsome; but there is no edifice distinguished for its splendour. The hospital, however, completed in 1823, is most spacious and commodious; being 700 feet in front, and each wing 300 feet long. It is extremely well managed, and believed to contain 2500 beds. The executive in Hamburg consists of a self-elected senate of twenty-eight members, who, however, are checked by popular councils chosen by all who have 240*l.* of property within the city. The population of the city is 122,815; that of the whole territory, 154,000.

Lubeck, as a Hanse town, rose to distinction as early as Hamburg, and possessed even a pre-eminence; the maritime law by which the concerns of that great confederacy were regulated having derived its name from this city. Its situation, however, within the Baltic, and not commanding the navigation of any great river, rendered it impossible for it to compete with the high prosperity to which Hamburg has, in modern times, attained. It acquired celebrity by the retreat of Blucher, after the disastrous battle of Jena; when that general, entrenching himself in the city, made a desperate stand against a superior force of French troops, in which Lubeck suffered severely. By the treaty of Vienna it regained its privileges as a free city, and a place in the Germanic diet. Its commerce is impeded by the small depth of water in the Trave, upon which it is situated, and which obliges vessels drawing more than ten feet to stop at Travemunde. What remains of its commerce consists in the export of the grain abundantly produced in the surrounding countries; for whose use it imports wine, colonial produce, and manufactured articles. Lubeck, for an old town, is well built of stone, and the church of St. Mary is elegantly adorned with a series of paintings called the Dance of Death. The fortresses, once of great strength, were demolished by the French. It has 22,000 inhabitants.

Bremen, at the mouth of the Weser, is enriched by the commerce of that important river,

down which are brought the productions of Westphalia and part of Franconia; countries extensive and valuable, though not nearly equal to those watered by the Elbe. The city is situated on both sides of the river, and has 40,000 inhabitants. The old town consists of narrow streets, bordered by high gloomy houses, built in the fashion of the middle ages: but there is a new town, in a much more elegant style. The government, which once approached to an oligarchy, is now almost purely democratic. In 1829 there entered Bremen 881 vessels; of which 66 were from the United States; 45, West Indies, chiefly Spanish; 14, South America; 110, Great Britain; 37, France; 5, Spain and the Canaries; 2, Italy; 80, Russia; 11, Sweden; 11, Norway; 66, Denmark; 321, North of Germany; 41, Prussia; 70, Netherlands, &c.; 2, the whale fishery. The chief imports were coffee, 13,500,000 lbs.; sugar, 17,000,000; cotton, 1,500,000; tobacco, 14,000,000; wine, 15,000 oxhoft (58 gallons); grain, 5098 lasts.

Frankfort on the Mayn is an ancient and venerable city, the seat of the Germanic diet. Its chief importance, however, is derived from being one of the great centres of the German inland trade: its fairs, which are held twice in the year, being second only to that of Leipzig. Its situation on the Mayn, near its junction with the Rhine, and at the meeting of the great roads which traverse Germany, is extremely favourable for this object. Though the houses are built of wood, there are several spacious squares and streets; also numerous large mansions which recall solemn historical recollections. The fortifications are no longer of any importance. The main body of the city is on the north side of the river; but a portion, called Sachsenhausen, stands on the south side, and is connected by a stone bridge. The inhabitants are in general well informed; and many private individuals possess valuable libraries, and collections relating to the fine arts. The Jews, who are very numerous, were formerly confined to a particular quarter, where they were shut in every night; but since 1796 this illiberal system has been discontinued. Population 50,000.

CHAPTER XIV

HUNGARY.

Hungary, called by the Germans *Ungarn*, with Transylvania, Sclavonia, Croatia, and the Bannat, forms a wide range of territory. Long the grand field of conflict between the Ottoman and Christian powers, it was finally possessed by the latter, and has for several centuries formed an integral and important part of the hereditary states of the house of Austria; which has recently annexed to it the portion of Dalmatia obtained from Venice.

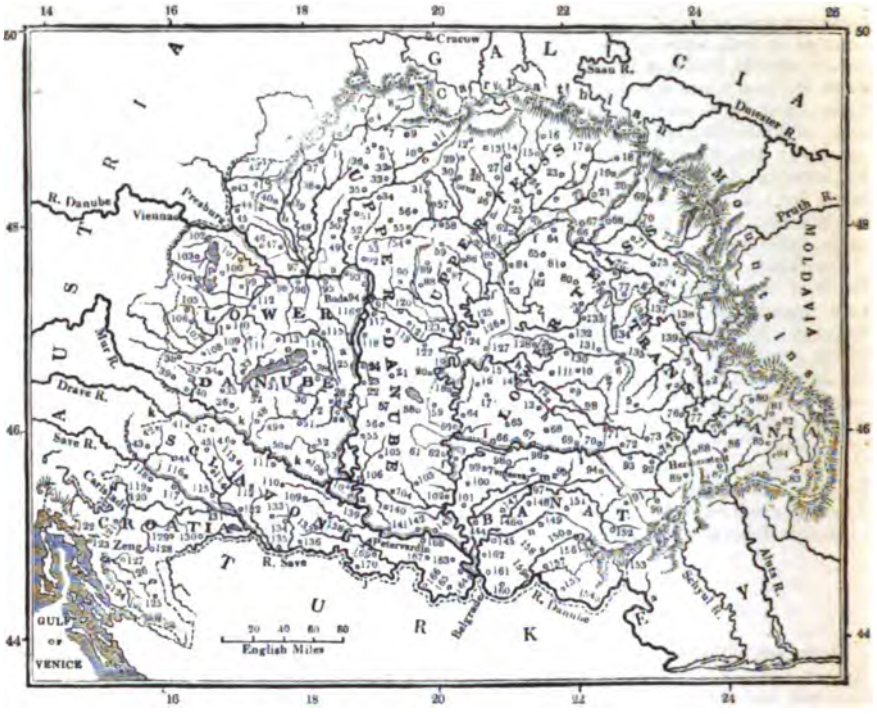
Sect. I.—*General Outline and Aspect.*

Hungary is bounded on the west by Germany; on the south and east by the tributary Turkish provinces of Bosnia, Servia, Wallachia, and Moldavia; on the north, by the Carpathian mountains, which separate it from Poland. It forms nearly a square of 400 miles in each direction, comprehending, with all its appendant states, an area of 133,000 square miles, inhabited by upwards of 12,600,000 people.

Surface. The great mountain girdle of the Carpathians ranges nearly in a semicircle round the northern and eastern border of Hungary. Several connected chains penetrate into the heart of the country, of which the most elevated are those of Tatra and Matra; the Julian Alps, and the mountains of the Bannat, on the southern border, render a great part of the country at least very hilly. On the other hand, there are plains of almost boundless extent, such as that to the east of the Danube, watered by the Theiss, which covers a space of upwards of 22,000 square miles; and another to the west of that river, reaching to the borders of Styria. Hungary, protected by the Carpathians from the blasts of the north, and sloping downwards to the south, enjoys a milder climate than any part of Germany. On the Carpathian terraces, particularly, the richest wines, and the choicest productions of southern Europe, are raised in perfection. There is a vast variety of country, however; many tracts being naked and rocky, others covered with marshes, and some even forming deserts of barren sand.

The rivers of Hungary are very important. The Danube, making a grand circuit, rolls through it, chiefly from north to south, and receives here its mightiest tributaries. The Drave and the Save, from the west, bring to it all the waters of the great alpine border of Southern Germany. The Theiss, after collecting, in a course of 400 miles, nearly all the streams which flow from the Carpathians, falls in from the east, near the southern frontier. The Marosch is the greatest tributary of the Theiss; and the Gran and the Waag are considerable streams, which flow into the Danube itself.

The lakes of Hungary are numerous, but only two are large; the Platten or Balaton which receives the waters of nine streams, and is supposed to pour them under ground into the Danube; and the Neusiedler, the water of which is salt. The long and sluggish streams of the Theiss and the Marosch spread into wide morasses, which, acted on by the rays of a burning sun, exhale pestilential vapours, often more fatal than the sword to the armies which have been led into their vicinity.



References to the Map of Hungary.

NORTH PART

1. Illava
2. Podhrad
3. Okadnid
4. Budatin
5. Trebesioe
6. Mosocz
7. Szucsan
8. Arva
9. Rozenberg
10. Presno
11. Batzuk
12. Leutsenau
13. Korolnok
14. Eperies
15. Dobra
16. Minvo
17. Dubrinitz
18. Polena
19. Jabovitz
20. Dollut
21. Szeredu
22. Unghvar
23. Vinno
24. Vasarhely
25. Galszecz
26. Kaschau
27. Lemes
28. Metzen
29. Rosnyo
30. Torna
31. Tiszoltza
32. Newsohl
33. Altsohl
34. Schemnitz
35. Pola
36. Kremnitz
37. Trentsent
38. N. Topolczony
39. Leopoldstadt
40. N. Zzombath
41. Sanderfalva
42. V. Eihelar
43. Sz. Janos
44. Malataka
45. Presburg
46. Samor
47. Szerdahely
48. Ereg
49. Sario
50. Bars
51. Ujfaln
52. Lonto
53. Hont
54. Balashagyarmath
55. Torincs
56. Gaacz
57. Ezaszkas
58. Geeszlete
59. Paract
60. Miskolcs
61. Mudjazzo
62. Tokay
63. Semplin
64. Mandok
65. Kereszkut
66. Tarpa
67. Kaszony
68. N. Szollos
69. Gylincz
70. Huszt
71. N. Tarna
72. Bocsk
73. Akno
74. Banya
75. Ujvaros
76. Szathman
77. Dobra
78. Korolg
79. Er Semjen
80. Lugos
81. N. Kallo
82. Dorog
83. Crege
84. Polgar
85. M. Kereszies
86. Agria
87. Kapela
88. Hatvan
89. Pata
90. Varseg
91. Pesth
92. Arx Nograd
93. Estergom, or Gran
94. Buda
95. Somlyo
96. Acs
97. Komorn
98. Gyor, or Raab
99. Csorna
100. Valla
101. Moson
102. Brieteshrun
103. Sizcz
104. Edenburg
105. Knezeg
106. Sgombathely
107. Hidveg
108. Saal
109. Turgye
110. Minke
111. Vasherbely
112. Gyanmath
113. Vesprim
114. Polgardi
115. Sz Fejervan
116. Tetenny
117. Soroks
118. Loczhaza
119. Ocsa
120. Suly
121. Pilis
122. Csegled
123. Abany
124. T. S. Miklos
125. Div Banhatma
126. Kardseg
127. Turkevi
128. Zsaka
129. Komadi
130. Grosswaradin
131. Tottes
132. Bahar
133. Szekelyhed
134. Somlya
135. N. Barod
136. Sibo
137 Kovar
138. Kacika
139. Dees.

SOUTH PART.

1. Vasarhely
2. Maros
3. Klausenburg
4. Torda
5. K. Aranyas
6. Bratka
7. Ketced
8. Kertes
9. Okros
10. Mihelo
11. N. Zalonta
12. Kis Jeno
13. Nadab
14. Bekes
15. Szarvas
16. Ruins of the Temple of Ecser
17. Monor
18. Csongrad
19. Ugh
20. Alpar
21. Izsak
22. Kis Karos
23. K. Harta
24. Solt
25. Miklos
26. Paks
27. Kolesd
28. Ozora
29. Sio Fok
30. T. Koppany
31. Sz Gyorok
32. Marczaly
33. Keszthely
34. Pak
35. Korpovo
36. Sz Peter
37. Cesztreg
38. Sz Gotthard
39. Martyanez
40. Lendva
41. Varasd
42. Krapina
43. Klanyecz
44. Popovecz
45. Kreutz
46. Virie
47. Kopreinitz
48. Henesd
49. Galosta
50. Sz Lorincz
51. Dombovar
52. Funfkirchen
53. Szekesо
54. Szezard
55. Baja
56. Jankovaez
57. Halas
58. Maisa
59. Kis Telek
60. Szegedin
61. Sz Maria
62. K. Kanisa
63. Josepheva
64. Vasarhely
65. Batonya
66. M. Casanad
67. Arad
68. Ug Sz Anna
69. Monorostya
70. Seborsin
71. Szirb
72. Zam
73. Ruda
74. Renged
75. Karlsburg
76. N. Enved
77. Lapad
78. Medias
79. Schaesburg
80. Siklod
81. Udvarhely
82. Baji
83. Kronstadt
84. Sankany
85. Kohalon
86. Stoltzenburg
87. Hermannstadt
88. Muhlenbach
89. Lunkany
90. Rea
91. Marga
92. Deva
93. Dobra
94. V. Facset
95. Thes
96. Allics
97. Benkenau
98. Knez
99. Komlos
100. Beodra
101. Melencze
102. Becze
103. Topolya
104. Oz Szivais
105. Ragusa
106. Bezdan
107. Bellye
108. Szalantz
109. Nassicze
110. Vucsin
111. Veroviditz
112. Kuttina
113. Belovar
114. Dambra
115. Ivanitsh
116. Dugozello
117. Nowigrad
118. Verdatzka
119. Petrovina
120. Carlstadt
121. Tuin
122. Nava
123. Zeng
124. Carlopago
125. Onatsh
126. Pernistsh
127. Ottoshat
128. Dresnik
129. Buzin
130. Zrin
131. Siszeg
132. Ostrusetz
133. N. Gradiska
134. Posega
135. Gradiska
136. Brod
137. Varos
138. Vinkovecse
139. Essek
140. Hodsak
141. Bacs
142. Neusatz
143. Retty
144. N. Becskerek
145. Usdin
146. Partos
147. Feny
148. Zobel
149. Denta
150. Szekas
151. Jerzseg
152. Ruen
153. Mehadia
154. Masenva
155. Neu Moldova
156. Majdan
157. Veiskirchen
158. Lagerdorf
159. Dubovacz
160. Balvanistic
161. Pancsova
162. Debeliacasa
163. S. Pazua
164. Semlin
165. Progan
166. Klenak
167. Ruma
168. Peterwaradin
169. Marovich
170. Soliane.

Rivers, &c.

a Danube, R.
b Waag, R.
c Gran, R.
d Jarosa, R.
e Ung, R.
f Theiss, R.
g Szamos, R.
h Koros, R.
i Marosch, R.
j Save, R.
k Drave, R.
l Raab, R.
m Bega Canal
n Berzava Canal
o Balaton Lake
p Neusiedler Lake.

Sect. II.—*Natural Geography.*

Subsect. 1.—*Geology.*

I. ***Primitive rocks.*** Primitive rocks are not abundant, and they do not occupy great tracts in the districts where they occur. They form the group of Presburg, the group of Nyitra, that of Tatra, to the south of which are situated the mountains of Gomor, of which they form the principal mass. They re-appear in Transylvania on the frontiers of Buckovina and Moldavia; to the south, in the chain of Fagaras, which ranges into the Bannat; to the west, in the mountains of Gaina and Bibar. They re-appear at Peterwaradin, and on the frontiers of Styria. A *central granite* appears to form the group of Presburg; the Krivan in the group of Ostrosky; of Polana, a little farther to the north; and the Tatra. Gneiss, containing beds of granite, of mica slate, &c., occurs in the mountainous parts of the county of Gomor, at the foot of the Tatra, on the frontiers of Buckovina, in the group of Fagaras, in the Bannat. *Mica slate* and *clay slate* occur on the acclivities of all the groups, the rocks of which have been already enumerated. Mica slate forms the group of Nyitra; it is very abundant in the mountains of Zeleznik, Jolsva, Rosenau (in the county of Gomor), where we observe it passing into clay slate, which rock often alternates with it, and at length becomes predominant, forming the whole superior part of the deposit. Mercury occurs at Szlana, in unctuous mica slate: *rhomboidal iron ore*, or iron glance, in the mountains of Ensiedel and Golnitz; *prismatic iron ore*, or hydrate of iron, in beds in clay slate at Zeleznik, and in the vicinity of Rosenau. Euphotide, or *diallage rock*, and *serpentine*, are found at Dobschau, and in the mountains which form the eastern point of Sclavonia and Peterwaradin. Porphyritic greenstone is met with in the upper part of the valley of Tiszolez, where the castle is situated.

II. ***Transition rocks.*** The rocks of this class begin at Presburg, where they rest on the primitive group: they range from S.W. to N.E. into Gallicia, in their course passing behind the Tatra; they cover a considerable space from north to south, where they join the group of Nyitra, the mountains of Zolyom and Gomor. They form the small group of Diosgyor to the north of Erlau; they appear in different points of the chain of sandstone which extends from Tatra into Transylvania; they become more abundant in Marmaros, on the eastern frontier of Transylvania, where they join again with the chain of Fagaras. We meet with them again in the countries of Nagy-Ag and Offenbanya, in the Bannat; and, lastly, in Croatia. Deposits of transition quartzy sandstone, and compact limestone, with greywacke, occur near to Neusohl, in the group of Tatra, and on the borders of Dunajec, towards the frontiers of Gallicia; but this compact limestone occurs alone in a great number of places, where it also terminates the transition deposits. Transition syenite and porphyritic greenstone are found at Pila near to Königsberg, at Schemnitz, Kremnitz, in the mountains of Borsony, of Karancs, on the northern foot of the Matra. It re-appears in the mountains of Kapnick, of Nagy-Ag, Zalathna, Voros-Patak; and it appears also to occur in the Bannat.

III. ***Secondary rocks.*** The following secondary deposits are described as occurring in Hungary:— 1. The coal formation rests upon transition strata at Jablunicza and Steurdorf, near to Oravicza, in the Bannat; and the same formation occurs at Fünfkirchen. 2. The Jura limestone formation occurs principally in the south-western parts of Hungary. 3. A sandstone formation, containing coal, the *sandstone of the Carpathians*, which, in the regular succession, lies upon the Jura limestone, and below the chalk formation, forms the whole chain extending from the foot of the Tatra into Moldavia; it also penetrates into Transylvania, of which it occupies all the central part; it also forms the Kahlengebirge, near to Vienna, where it appears to be connected with the coal formation and old red sandstone of Moravia. 4. The chalk formation also occurs in Hungary: thus a remarkable kind of this deposit appears at Buda Oros, and a particular compact marly limestone, abounding in green talcy disseminated parts, which may be referred to this chalk, occurs in Transylvania.

IV. ***Tertiary rocks.*** Molasse, or sandstone with lignite, is the most abundant of the Hungarian tertiary rocks, and covers at the same time the secondary rocks and the conglomerates belonging to trachyte. It covers the southern declivity of all the mountains which form the north-western part of Hungary; it extends into Gallicia, at the foot of the Carpathians; it is found in the centre of Transylvania, at Clausenburg, Carlsburg, Hermanstadt, and Cronstadt. It covers, towards the west, the foot of the mountains which form the western limit of that principality, and extends even into the Bannat; it forms nearly the whole south-western part of Hungary, from whence it extends into Croatia. The *coarse marine limestone of Paris* occurs in the neighbourhood of Buda and Œdenburg, on the banks of the Lake Balaton, and at Fünfkirchen. It occurs also in Buckovina, and in Eastern Gallicia. The *limestone containing lymneæ* occurs at Nagy-Vasony, and in the marshes of the great plain of Hungary.

Tertiary Plutonian rocks. Trachyte. This Plutonian rock appears to rise through the tertiary deposits, and is therefore to be considered as having been sent from below after the deposition of these strata. It forms five groups; one occupies the districts of Schemnitz,

Kremnitz and Königsberg; the second occurs to the north of the Danube, where it forms the mountains of Dregeley and Vissegrade; a third forms the mountains of Matra, on the northern border of the great plain; a fourth includes the mountains between Eperies and Tokay; lastly, a fifth occurs at Vihorlet, and extends into the counties of Ungh and Beregh. The same formation forms a considerable group in Transylvania, on the frontiers of Moldavia; and every thing seems to indicate that it will also be found in the district of Nagy-Ag and Zalathna. The porphyritic variety of trachyte is the most abundant; the other varieties occur only in the Schemnitz group. Pitchstone, pearlstone, pumice, and obsidian occur, associated with the trachyte, around the trachyte hills; and, extending from them into the plains, there are vast beds of trachyte conglomerates or tuffas. These conglomerates are formed of debris, often transported and triturated in water. Near to the hills, they are composed of very large blocks, but in the plains of scoriaceous and earthy matters; and, lastly, of a pumiceous matter, sometimes ground down into an earthy form. These deposits contain fossil organic remains; viz. opaline wood, impressions of plants and shells, of various kinds. The trachytic conglomerates are the principal repository of precious opal, and the pumiceous conglomerates that of jasper-opal and wood-opal. The conglomerates composed of broken-down and decomposed pumice are very abundant between Tokay and Tolesva. The porphyroidal varieties form the mountains between Erdo-Benye and Tallya; they appear again in the county of Beregh, where they contain considerable masses of aluminous rock. The auriferous deposits of the trachyte formation are found in masses in the pumiceous conglomerate, or in veins in the vesicular variety of trachyte which is used for mill-stones.

V. *Alluvial rocks.* Old alluvial rocks, and also those of modern formation, abound in Hungary. Of these, the most interesting are the calcareous tuffas, some of which are diluvial, others modern, and daily forming.

SUBSECT. 2. and 3.—*Botany and Zoology.*

The Botany and Zoology of Hungary are similar to those of Germany.

SECT. III.—*Historical Geography.*

To the Romans Hungary was known under the name of Pannonia, and was the domain of tribes still more rude, wild, and wandering than those of ancient Germany. The Romans formed out of it the province of Dacia, including the district lying south of the Danube, which, for a lengthened period, was the bulwark and boundary of their empire in this quarter. The fatal step of allowing a passage, in the fourth century, to the flying Ostrogoths, laid open the defenceless empire; and, from time to time, a continued torrent of barbarous invaders poured in from the extremities of eastern Europe, and even of central Asia.

The Huns, in A. D. 433, established themselves in this country, which from them has ever since retained the name of Hungary. Attila, whom Gibbon has styled the supreme monarch of the barbarians, established his court and camp on the Theiss and the Danube. In the ninth century followed the Magyars, whose posterity form still the ruling body in the nation.

Hungary was erected into a kingdom, partly hereditary, and partly elective, in A. D. 1000. Its most powerful monarch was Louis the Great, who, in the fourteenth century, carried his arms into Italy.

The union with Austria took place in 1438, through the marriage of Albert of Austria with Elizabeth, heiress of the deceased king. The crown was afterwards held for a time by Ladislaus, king of Poland, and by the gallant chiefs Huniades and Matthias Corvinus; but it ultimately reverted to, and remained with, the house of Austria. Dreadful wars were, however, waged with the Turks, who repeatedly ravaged the whole kingdom, and even laid siege to Vienna; but for more than a century, that declining power has been completely expelled from Hungary, and has considered it quite enough to preserve its own borders from Austrian invasion.

SECT. IV.—*Political Geography.*

The political relations of Hungary, considered as a member of the Austrian empire, have been already considered. It has, however, some features peculiar to itself. The kingdom is now hereditary in the Austrian dynasty; but, in case that should become extinct, the right of choice would return to the nation. The Hungarian Diet possesses high prerogatives. Without their vote the king cannot make or change the laws, impose taxes, or even levy troops. Every new king, before his coronation, must take an oath to maintain the constitution of Hungary. The diet consists of four states or orders:—1. The bishops and abbots. 2. The magistrates or great nobles. 3. The knights. 4. The free cities. The two former appear in person, and constitute what is called the magnate table; the two latter, who form what is called the state table, appear by their representatives. The diet assembles every three years,

at Presburg or Buda, and sits during the king's pleasure. If three of the orders agree to any proposition, the fourth must give its consent.

In the administration, the body of the people, with the exception of those who form part of the corporations in the free cities, have no share: a circumstance of which advantage is taken to throw upon them the whole burden of taxation, from which the nobles and clergy hold themselves exempt. The peasantry, though nominally emancipated, are still really held in a state of predial slavery. They are allowed, indeed, a considerable extent of ground; from thirty to forty acres each. Out of the produce, however, the occupant has to pay one-tenth to the church, and one-ninth to his landlord, who also claims one hundred and four days' labour in the year, besides sundry other little gifts and services, which are liable to indefinite overcharge. They are also required to co-operate in the making and repairing the roads, and have troops quartered upon them. On the whole, their condition appears decidedly the worse for the privileges enjoyed by a proud and turbulent aristocracy, who have always resisted every measure proposed by the sovereign to ameliorate the condition of the great body of the people.

The army in time of peace amounts to about 100,000 men, and in time of war it is increased to about 235,000. The expense is defrayed by a peculiar tax, called *kriegssteuer*, or war-tax. The revenue is supposed to amount to about 20,000,000 florins.

Sect. V.—*Productive Industry.*

The agriculture of Hungary, notwithstanding the rude manner in which it is conducted, and the extent of unfavourable soil, yields very copious products, out of which a large surplus arises for the supply of the neighbouring countries. According to an estimate which Grellman has founded on the *cadastre* instituted by Joseph II., it contains 23,905,000 jochs of productive land, out of an entire surface of 39,329,000; the rest being waste, water, and morass, or otherwise useless. Among these are about 5,000,000 arable, 7,500,000 pasture, 9,000,000 woodland, 1,000,000 vines, and 600,000 garden ground. Schwartner and Blumenbach agree in rating the produce in grain at 105,000,000 bushels. A little maize and rice is grown in the Bannat; otherwise the kinds of grain are those used in Germany. The agriculture is very rude. Light carts; a plough, of which the share is almost horizontal, and which seldom penetrates above three inches; and meagre cattle, present themselves in the dirty farm-yard (*fig.* 434.). In the rotation of crops, every third year is fallow. Cattle and sheep are bred, and even exported, in vast numbers; though the breeds, before late improvements, were by no means distinguished. The horned cattle, however, are large, vigorous, and active, of a dirty white colour, and excellently adapted for the plough. The breed of horses had fallen into total disrepute, till it was improved by the pains bestowed upon the imperial stud. The native Hungarian sheep bears very coarse wool; but in all the western districts it is much improved by crosses with the Spanish. Some of it is now very fine, and is even imported into England as the best Saxon wool. In 1810, there were found 451,000 horses, 2,400,000 oxen and cows, and 8,000,000 sheep; now probably more. Besides the ample supply of bacon, which is found at the table of almost every peasant, the number of hogs annually exported is from 200,000 to 250,000. Wine is a special object of Hungarian culture. That which bears the name of Tokay, and is produced there, and in a number of surrounding districts, is most celebrated. It is sweetish, luscious, and does not attain to perfection till it is very old. A good deal of the superior richness of the finer sorts is derived, according to Dr. Townson, from mixing the essence or juice of a small number of half-dried and shrivelled grapes with the ordinary wine of the country. Two sorts are produced in this way, *ausbruch* and *mazchlap;* the only difference between them being, that for each pint of essence put into the mazchlap, two are put into the ausbruch. Tokay is consumed chiefly at the tables of the great Hungarian, Polish, and Austrian nobles. The total annual produce of the Hungarian vineyards is estimated at about 18,000,000 eimers. The Hungarians make their wines a subject of especial pride, absurdly pretending that the worst is superior to the best French wine. Tobacco is cultivated to a greater extent than in any other European country, and is largely exported. Hemp, flax, and madder are also staple products. Bees are very extensively reared; and the exports of honey and wax are estimated at about 250,000*l.* To these articles may be added, though no longer to the same great extent as formerly, cabbage and other garden products, with some fruits, as plums and melons.

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Hungarian Farm-Yard.

Manufactures, in the sense understood in England, can scarcely be said to exist in Hungary. There are, however, coarse domestic fabrics of linen and woollen for home consumption. Hides and skins are tanned, after a simple process, and on a small scale, chiefly by the peasants.

The subterraneous wealth of Hungary is equally copious with that which its surface yields. Gold and silver, in particular, the most brilliant and precious of the metals, are raised from the mines of Schemnitz and Kremnitz in greater abundance than in any other part of Europe. The mines are chiefly royal property, or, where private individuals are allowed to collect the ore, they must, at least, give it to the royal smelting-houses at a fixed rate. The annual quantity is stated by Hassel at 1050 lbs. of gold, and 41,600 lbs. of silver. There is a great reduction of the former quantity, partly owing to the exhaustion of the mines, and partly to the poverty of the Austrian government, which can no longer afford to make the same exertions. According to Delius, the value of the gold and silver extracted between 1740 and 1773 was upwards of ten millions sterling. The engine employed at Schemnitz (*fig.* 435.), for drawing up the ore, and letting down machinery, is moved by water, and was considered the finest existing, before the invention of the steam-engine. The mines of Hungary yield also 10,000 tons of iron, 19,000 tons of copper, 1225 tons of lead, besides a great quantity of coal and salt. According to Hassel, the entire number of miners and labourers employed amounts to 45,000.

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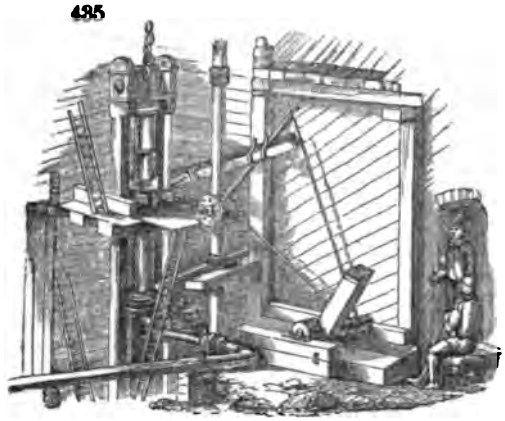

Machine for working Mines.

Fishery. The rivers and lakes of Hungary are full of fish; and the fishery is of considerable importance and value. The Theiss is said by the inhabitants to consist of two parts, one of fish and one of water. In 1810, the importations of fish from Hungary into Lower Austria were estimated at 86,000*l.*

The commerce of Hungary, notwithstanding its fine rivers, labours under great disadvantages, from the want of sea-coast, from the navigation of the Danube being frequently impeded, and from its embouchure being in the possession of the Turks, whose barbarism has hitherto baffled every attempt to open a communication with the Black Sea. The inland traffic is tolerably brisk, and the roads are continually covered with animals, and with wagons, driven by the Jews, gipsies, and other foreign races, to the 2000 fairs which are annually held throughout the country. The great centres of this internal traffic are Pesth and Debretzen. The exterior commerce of Hungary consists in the exchange of rude for manufactured produce. In 1802, the leading exports were, cattle, 8,483,000 florins; grain, 2,367,000; wine, 2,381,000; wool, 5,039,000; leather, 1,245,000; which, with minor articles, made 24,515,000. The leading imports were, woollen cloth, 4,668,000; cottons, 1,611,000; linens, 2,692,000; silk, 1,223,000; coffee, &c. 2,790,000; hardware, &c., 1,299,000; making, with minor articles, 18,390,000 florins.

SECT. VI.—*Civil and Social State.*

The following is a statement of the progressive population of Hungary and its dependencies, as deduced from the conscription lists:—

Places.	Date.	Population.	Date.	Population.	Date.	Population.	Date.	Population.
Hungary	1785	7,098,574	1805	7,961,414	1817	8,063,680	1829	9,659,686
Transylvania	1786	1,416,035	1811	1,501,406	1817	1,664,800	——	2,027,566
Military limits	1803	871,237	1807	911,760	1815	940,598	——	994,315
Dalmatia	1807	256,863	——	——	1817	304,055	——	329,727
		9,642,709		10,374,580		10,973,133		12,941,294

If these returns may be depended upon, they show a gradual and considerable augmentation. The apparent diminution of the population within the military limits was occasioned, we believe, by a transference of territory.

The Hungarians consist chiefly of two races, the Magyars, or ruling race, who are estimated by Csaplovicz at 3,500,000; and the Sclavonians, the subject people, at 4,050,000. There are also 640,000 Wallachians; 577,000 Germans; 170,000 Jews; 50,000 gipsies; besides Arnauts, Greeks, Armenians, &c. There is no middle class in Hungary. Society consists of haughty nobles, poor peasants, and peddling traffickers. The nobles are a brave, generous, and hardy race. To them applies Voltaire's character of the Hungarians, as "a

proud and generous nation, the scourge of its tyrants, and the defender of its sovereigns." They have the most devoted attachment to their ancient privileges and customs, and to every thing Hungarian; the most rooted dislike of the Germans and every thing German. The peasantry present an uniform aspect of rudeness and barbarism, not one being advanced beyond another, nor the whole beyond what they were in a remote age. It is impossible, according to Mr. Sherer, that when the Romans invaded Illyria, the peasants could, as respects dress, aspect, and manners, be more completely barbarous than at present; nor could the wagons of the Scythian camp be ruder than those which still crowd the streets of Presburg. The traffic is chiefly carried on by Germans, Jews, and the gipsies, a numerous race, who present the same aspect as in other parts of Europe.

In respect of religious worship, full freedom has been long established in Hungary, and all Christian professions are considered equal in the eye of the law; but, in practice, it is complained that this equality does not go beyond toleration. The Catholic is the most numerous and powerful; its professors are estimated by Csaplovicz at about 5,000,000; at the head of whom are three archbishops, thirty-nine bishops, twenty-two abbots, and about 9300 clergymen, secular and regular. The Protestants amount to about 2,100,000, and have 1867 clergymen. The Greeks amount to 629,284, and have an archbishop, three bishops, and nearly 4000 clergy. The bishops possess extensive property, and are bound to take the field with their vassals in the national insurrection. Seven bishops were killed in the battle of Mohacz. Schwartner estimated the Hungarian clergy at 15,600; which, taking the population at 9,600,000, gives one clergyman for every 610 individuals.

Learning is not altogether neglected in Hungary. Latin is, in some places, the ordinary language of the higher ranks, and mathematics and natural history meet with encouragement. There are only fifty-eight printing presses, and sixty paper manufactories in the kingdom. Such is the want of information, that Dr. Bright found the leading people at Schemnitz impressed with the belief that Mexico was an English island, and that sugar and coffee grew in Great Britain! Hungary, however, has a university, with a library of 60,000 volumes, and a valuable museum. In 1820, it was attended by 985 students. According to Dr. Bright, many of the nobles are exceedingly anxious to promote the intellectual improvement of their countrymen.

The amusements of the body of the people consist chiefly of some national dances, particularly on occasion of the vintage, which is a season of unbounded gaiety. The national military dress being the same commonly denominated hussar, is picturesque and martial, and has been imitated by the other European nations. The peasantry wear a broad-brimmed varnished hat, with a low rounded crown; they have their matted long black hair negligently plaited or tied in knots, a blue jacket and trousers covered with a cloak of coarse woollen cloth or sheepskin, still retaining its wool. They live in small villages, or rather clusters of cottages, arranged on each side of a muddy road, whitewashed, roofed with thatch, but the interior containing, generally, three tolerably comfortable apartments.

Sect. VII.—*Local Geography.*

Hungary is divided into, 1. Lower Hungary, which forms the western; and, 2. Upper Hungary, which forms the eastern part of the kingdom. 3. Croatia. 4. Sclavonia.

Lower Hungary is divided into two parts by the Danube. That on the north of the river is the most important; and contains the great mining districts of Schemnitz and Kremnitz.

Presburg, established in 1536, as the place where the kings were to be crowned, and the diets to be held, was the capital of Hungary, until 1784, when the seat of government was transferred to Buda. Its population is 41,000. The houses and streets are ordinary in their appearance; and the suburbs only can boast a few palaces of the nobles. The castle, lately burned down, except the walls, overlooks the very extensive plain in which the city stands. Presburg has a few manufactures, and a considerable trade, chiefly in corn and wine, up and down the Danube. There is a large Lutheran seminary, attended by about 500 students.

Buda, or Ofen (*fig.* 436.), and Pesth, separated by the Danube, form, in conjunction, by much the most important city in Hungary. Buda, on the right bank, is the first in dignity, being now the seat of government, which was transferred thither by Joseph II. from Presburg, in 1784. It consists chiefly of an extensive fortress seated on a lofty rock, somewhat resembling the castle of Edinburgh, and containing the houses of the Palatine and of some of the principal nobility. Along the foot of the castle several streets extend upon the river. One of the most

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Buda.

remarkable features consists of the baths, which are ancient, and of Turkish construction. The citizens resort to them in crowds, exhibiting themselves in a very unscrupulous state of nudity. Pesth, on the opposite bank, is a larger and now more important city, forming the centre of the inland trade of Hungary. Four immense fairs are held there, which present an epitome both of the people and productions of the country. The native products are chiefly sold without the city, on both sides of a long road, as they arrive in the wagons, disposed for that purpose so as to form a species of square enclosure. An immense space is covered with horses, sheep, and cattle, the latter often amounting to 30,000. The goods brought down from Vienna are displayed in a large open space within the town, and in ranges of booths, which are penetrated by two broad streets crossing each other at right angles, and by other smaller streets and passages. The Danube, also, for the space of half a mile, is covered with boats and barges, which, with the banks, serve as a market-place for the goods. For recreation are prepared various sights, puppet-shows, fruits, especially water-melons in immense quantities, and refreshments cooked and presented by the gipsies. Great commercial roads branch off from Pesth through every part of the country, and towards Austria, Moravia, Gallicia, Transylvania, Croatia, and Italy. Pesth contains 61,502 inhabitants, and Buda 33,000; making in all 94,500. Pesth is chiefly modern, and well built; containing many good streets and handsome houses, besides churches. There is considerable magnificence in the grenadiers' caserne, built by Charles VI., and in a large unfinished edifice, raised by Joseph II., which Townson calls a palace; but Bright does not think it possible to say what it is. The national university, already mentioned, is in Pesth. The city is without walls, and is connected with Buda by a bridge of 240 boats, which are moveable, and through which, at stated times, an opening is made to allow the passage of vessels and rafts. In winter it is taken down, and the two cities communicate over the ice.

The mining capitals, Schemnitz, Kremnitz, and Neusohl, are situated on the declivities of a bold and mountainous country, forming a lower ridge of the Carpathians. Schemnitz, the great centre of the mining operations, is in a position peculiarly rugged, the streets being built along the sides of hills, and separated from each other by cliffs and woods: of its 17,000 inhabitants, 8500 are employed in the mines. The town was founded in 745; but it was Maria Theresa who established the mining college, which is conducted on a very liberal footing; comprehends lectures on every branch of natural knowledge; and is attended, even in bad times, by 200 or 300 students. The mines have been already noticed. The water is drained off by a subterraneous stream of about twelve miles in length, which empties itself into the river Gran. Kremnitz (*fig.* 437.) is only about half the size, and has a more straggling and neglected appearance; though one of its churches is very profusely ornamented. Neusohl, with about 10,000 inhabitants, is supported by the copper-mines, and has a large manufactory of arms in its vicinity.

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Kremnitz.

There are also other towns of some importance in this division of Lower Hungary. Gran, on the Danube, was once a military post of first importance, though its strong castle is now in ruins; but it is still the ecclesiastical capital, its archbishop being the primate and chancellor of the kingdom. Mineral waters, resembling those of Epsom, have also been lately discovered there, from which a manufactory of magnesia has been established. This district extends also along the lower course of the Danube, on its eastern bank, where it approaches the Turkish frontier. Here occur several large towns. Theresopol, named after Maria Theresa, in a wide plain, with 30,000 inhabitants; Neusatz, a free city on the Danube, with 17,000 inhabitants, and a considerable trade with Turkey; Zombor, not far from the Franz canal, with 18,776 inhabitants, and a large trade in corn and cattle. The bulk of the inhabitants in all these three towns consists of Greeks and Servians.

That part of Lower Hungary which lies to the south-west of the Danube, enclosed between that river and the Austrian and Illyrian frontiers, contains also a number of places of considerable importance. Œdenburg is finely situated, in a country variegated with wooded and vine-covered hills, which surround the great lake of the Neusiedler See. Of 11,487 inhabitants, 4600 are Protestants. There is more manufacturing industry than in most Hungarian towns; but still it owes its main prosperity to its position; being the route by which supplies of provisions are conveyed from Hungary to Vienna. For this purpose, 40,000 cattle, and 80,000 hogs are annually brought to its markets. There is also a great trade in wine, of which 32,000 eimers are produced in its neighbourhood. Œdenburg has also in its neighbourhood a mine of coal, which yields about 12,000 tons annually. Raab,

on the river of the same name, near its junction with the Danube, once celebrated as a fortress, is now more noted for its fairs and markets. Of its 16,000 inhabitants, more than half live in the suburbs. Comorn, at the junction of the Danube and the Waag, is still more celebrated for its ancient strength; and so early as the year 1272 it was considered one of the bulwarks of the Austrian monarchy. Its situation gives it still a considerable trade; which, since the year 1805, has caused its population to increase from 9300 to 11,000. It suffered severely by shocks of earthquake in 1763 and 1783. Stuhlweissenburg, in the heart of this marshy district, was anciently a splendid town and a royal residence, called Alba Regalis. For five centuries the kings of Hungary were crowned and their remains deposited here. Since the beginning of the last century, it has been entirely neglected; and though there are a number of buildings which bear the stamp of grandeur, it is but a poor and mean place. It has a population of 18,776. A little to the west of Stuhlweissenburg is the great lake of Balaton or Platten, about eighty miles in length and twelve in breadth, surrounded by vast woods, and by precipitous though not lofty banks. Vesprim, Guns, and Steinamanger are small country towns, the last only remarkable by being the seat of a bishop and of a clerical academy. Fünfkirchen is an ancient city, which makes a somewhat magnificent appearance by its ecclesiastical edifices, and its university, which was once attended by 2000 students, and has produced a number of eminent men. The bishop has a good library, of 20,000 volumes, to which the citizens are allowed access; an advantage, however, of which they rarely avail themselves. There are, moreover, a great quantity of hogs and cattle brought for sale to Fünfkirchen. Population, above 11,000. Mohacs, on the Danube, is only a large assemblage of cottages; but it is celebrated as the scene of the great battle gained by the Turks in 1526, when Louis II. perished, with twenty-eight magnates, 500 nobles, seven bishops, and 22,000 troops. Szigeth is a strong post, celebrated in Hungarian warfare, situated on the Almas.

Upper Hungary consists of a vast range of territory, extending from the Danube to the eastern boundaries of the kingdom. The hills and mountains of the northern part, being finely watered, produce in the highest perfection those delicious wines for which Hungary is so famous. The southern part consists of one unvaried and almost unlimited plain, through which flows the Theiss, which traverses Upper Hungary from north to south. This plain consists, in some places, of barren sand blown into hillocks; in others, of immense expanses of fine pasturage covered with numberless flocks and herds; while a great part of the tract immediately bordering on the Theiss is marshy and inundated.

Debretzin, or Debreczin, for extent and importance, takes decidedly the lead of all places in Upper or Eastern Hungary; yet it may be called an enormous village, rather than a city, or even a town. Population, about 40,000. The houses, with scarcely any exceptions, are mere cottages, one story high, roofed with thatch, and arranged on no regular plan. There is no pavement, and in the most frequented quarters the passenger flounders through sand and mud. Instead of a wall, it is surrounded by a hedge, and the town-gates are, like field-gates, stuck with thorns and brambles. The greater part of the inhabitants are Calvinists; and by their plain attire, their simple deportment, the stillness and earnestness which sit upon every countenance, give a character to the place very different from that of a gay capital; yet, next to Pesth, it is the most commercial town in the kingdom. Every quarter of a year there is a market, when a space of ground which the eye can scarcely command is covered with flocks and wagons, bales and cases, tents and huts. A fine species of soap made here is considered a luxury even at Vienna; and a great deal of saltpetre is manufactured. The Calvinists have an extensive college, attended by 550 students, and possessing a library of 20,000 volumes.

Among other towns of Upper Hungary, must be mentioned Grosswaradin, to the east of Debretzin. It is a pretty frontier town of the district of Hungary, inhabited by the Wallachians. The inhabitants, unlike those of Debretzin, are particularly gay; music and dancing are heard in every house; and there are four warm baths, to which the inhabitants resort for pleasure as well as health. Kaschan, in the northern hilly country, is called by Townson the metropolis of Upper Hungary, but does not seem to be at present considered in that light, nor can it any way rival Debretzin: it contains 15,500 inhabitants. The principal street is broad and pretty regular, adorned with some good houses of the nobility, an elegant coffee-house, and a fine Gothic church. At about a day's journey, is a mountain which produces that fine stone, the true opal, which, as some suspect, is found nowhere else in the world; those called the oriental being alleged to be all brought from this mine. Erlau, or Agria, a larger town, but ill-built, is the seat of a richly endowed archbishopric; one of the late incumbents of which, otherwise not much extolled by Townson, founded a very handsome college. Miskolcs is also a large town in the same neighbourhood, in a rich wine and fruit country, of which it collects the products; with a population of 21,400. Tokay is only a village; and the surrounding district is only one of a number producing the celebrated wine already mentioned, which bears its name. Szegedin, farther down the Theiss, at its junction with the great tributary of the Marosch, is a large and strong city, with 30,000 inhabitants, and a flourishing trade in wool and tobacco, of which 60,000 cwt. are sent down the

Danube; salt from Transylvania, and cotton from Macedonia. A Greek protopapa resides here; and there are several seminaries and convents. Temeswar, in the south, the capital of the Bannat, is one of the strongest, and also of the most beautiful, towns in the kingdom. It has a number of public buildings which are admired; as the Gothic cathedral, the Greek church, the synagogue, the military and burgher hospitals. There are some manufactures, and a considerable trade on the Bega canal. Population, 13,660.

Croatia is a district which, though possessing a people and language of its own, has for some time been attached to Hungary, and sends deputies to the Hungarian diet. Since the re-annexation of Carlstadt, which a long time formed part of the kingdom of Illyria, it extends over 3756 square miles, and contains about 614,000 inhabitants. The district of Carlstadt, on the Illyrian frontier, is mountainous; but eastward the country declines into a level plain, traversed by the Save. Corn, cattle of small size, and tobacco of good quality, are its staples. The Croats form bodies of light horse rather distinguished in irregular warfare. Agram is a large and strong town, on the Save, without manufactures, but with a good deal of trade, both on the river and between Hungary and the Adriatic. Population, 17,000. Varesdin and Carlstadt are smaller places, deriving some importance from being in this last line of commerce.

Sclavonia is a district to the east of Croatia, and the only one bearing the name of a nation whose colonies and language are so widely diffused. It enjoys a mild climate and fertile territory, yet more than half of its surface, of 3678 square miles, is covered with wood, and the rest is by no means cultivated to the extent of which it is capable, containing only 348,000 inhabitants. Its political relations are in many respects the same as those of Croatia; its products and trade similar, and it is equally destitute of manufacturing industry. Posega is accounted the capital; but Essek, a strong place on the Drave, near its junction with the Danube, is of more importance.

Transylvania, meaning the country beyond the Carpathian hill forests, and called by the Germans Siebenbürgen, is a very elevated territory: the Carpathians, which enclose it in the form of a half-moon, present summits of 7000 or 8000 feet. To the height of 5000 feet they are covered with wood, but beyond that altitude they are rugged and alpine. The mountains are perforated by numerous caves. There are many little lakes; and the morass of Kovaszna is remarkable for its almost unfathomable depth. Notwithstanding its rugged surface, Transylvania has a mild climate, and is well cultivated. Its produce in grain is reckoned about 17,000,000 bushels. Cattle form a principal staple: the flesh of the oxen is good; but the milch cows are not of great excellence, and the wool of the sheep is coarse. Wine is produced in abundance, to the extent of 3,640,000 eimers, according to Blumenbach; but, as it does not keep, it is not an object of trade. Transylvania is rich in minerals, particularly gold, of which it yields 2750 marks; also 3500 tons of iron. It might supply the whole empire with salt; and sends, in fact, 25,000 tons into Hungary. The miners, chiefly German, amounted, in 1791, to 4328. There are no manufactures, except the most common fabrics. The people consist almost entirely of strangers, who have immigrated from the neighbouring and distant countries. Lichtenstein reckons 828,165 Magyars, 302,000 Saxons, and 507,700 Wallachians; which, with other small sects, made up, in 1817, a population of 1,664,800. In 1829, the number appears to have risen to 2,027,566. The Protestants predominate in Transylvania; amounting, by Hassel's enumeration, to 348,000, with 40,000 Unitarians; while the Catholics are 110,000, and the Greeks 150,000. These, we presume, are heads of families, as otherwise they would not nearly compose the amount of the population. The religious professions have each seminaries for rearing their respective students; and there are two societies for the culture of the Hungarian language and history, both established by Count George Banky. Hermannstadt, situated in the Saxon district, and considered the capital, is surrounded with a double wall, and contains 20,000 inhabitants, an extensive Lutheran seminary, two public libraries comprising 20,000 volumes, a picture-gallery, and a national museum. Kronstadt, however, also Saxon, and on the most eastern frontier, is a still larger place, containing 30,000 inhabitants, with various little manufactures, and enjoying very extensive intercourse with Turkey and Greece, to the amount of 1,000,000*l.* sterling. Klausenburg, near the western frontier, is a large open town, containing three seminaries, Catholic, Lutheran, and Unitarian, attended by about 1200 students. Karlsburg is a smaller town, defended by a strong castle on a hill above the Marosch, and honoured by the tombs of the Huniades.

The military frontier is a long range of territory, appropriated from the southern border of Croatia, Sclavonia, Hungary, and Transylvania, and placed under a peculiar régime, in the view of forming a barrier upon this side against the inroads of the Turks. For this purpose it is placed under a system completely feudal, all the lands being held under the condition that their occupants take the field in person whenever they may be called upon. Each individual receives a certain number of acres, which cannot be sold, pledged, or dismembered, though it may be exchanged for another of equal amount. That his fields may not suffer when he is called out, the inhabitants are divided into families of about sixty, at the head of whom is a directing patriarch, and among whom the culture and produce of the land

is in common, each family, according to the number that it has sent out, and their length of service, having allowances or remission of tax of twelve guilders a head. The country is divided, not into provinces, but into generalats and regiments; the Carlstadt regiment, the Gradisca regiment, &c. This singular arrangement began with Croatia, in 1566, and ended with Transylvania in 1764. The whole population of the Military Frontier is about 1,000,000, with a force of 50,000 men in actual service. Of late its chief use has been to form a cordon for preventing the irruption of the plague. This frontier partakes physically and morally of the peculiarities of all the countries and all the people from which it is severed. The industry is chiefly pastoral, not much more than a fourth of the lands being under the plough. The cities are called Free Military Communities; but none of them contains 10,000 inhabitants. Semlin, in the Sclavonic frontier, is the largest. Peterwaradin, Brod, and Gradiska, are strongly fortified little towns.

Dalmatia is the rudest province of the Austrian monarchy. It forms a line of coast, about 300 miles in extent, from the border of Illyria to the Gulf of Cattaro, having a long chain of islands running parallel. This coast is bleak and arid, covered with woods and bushes; till, in the interior, it rises into long ranges of bleak and rocky summits. Dalmatia produces scarcely any grain; but its cattle, though small, are numerous: honey is produced in great perfection from the numerous aromatic plants on its hills; the fishery employs 8000 men, and is supposed to produce in value nearly 80,000*l*. The population consists of Morlachians (sometimes called also Dalmatians), and Montenegrins, both of Sclavonic race, and a mixture of Italians. Zara, the capital, is a little town, on a promontory of land, severed from the continent by so deep an abyss, that there is no communication unless by a bridge. Spalatro (*fig.* 438.) is a larger town, on a little peninsula, strong by art and nature. It contains a number of large old houses, forming narrow and irregular streets; but it is chiefly distinguished by the

438

Spalatro.

439

Amphitheatre of Pola.

remains of the superb palace of Diocletian, one of the grandest monuments of ancient architecture. Pola, once a great and splendid city, is reduced to a village, but still contains a most magnificent amphitheatre (*fig.* 439.), in high preservation, one of the most celebrated remains of Roman antiquity. Sebenico, Ragusa, and Cattaro are tolerable seaports, with good harbours; and the latter, on the Turkish border, is an important military position.

CHAPTER XV.

POLAND, WITH DUCAL PRUSSIA.

Poland is a large country, which, though it has been so studiously expunged from the map of Europe, seems still to retain its claim to be considered as separate and distinct. The same physical aspect characterizes it, and the people, in their character, their language, and all their national feelings, are still Poles. We do not annex Lombardy to Austria, nor Hanover to Great Britain, because they are ruled by the respective sovereigns of these countries; neither, it should seem, ought the partitioned members of the Polish monarchy to be yet viewed as actually incorporated into the territory of their successful invaders. We shall include Ducal Prussia, as being entirely enclosed by Poland, and participating in all its natural features.

Sect. I.—*General Outline and Aspect.*

Poland forms a vast level expanse of territory, the most easterly in Europe, except Russia. On the north it is bounded by the Baltic; on the east it has Russia, from which it is divided

chiefly by the courses of the Dwina and the Dnieper. On the west it has Germany, mostly the Prussian territories; while on the south it is separated by the Carpathian mountains from Hungary and Transylvania; and it borders also on the tributary provinces of the Turkish empire.

The surface of Poland forms part of that immense and unvaried plain which covers the northern portion of all the central European countries. This plain, which includes only about half of France and of Germany, occupies the entire extent of Poland. Even the Carpathian and the Silesian mountains, which border upon it, and shoot branches into it, make scarcely any sensible change in its level immensity. A great portion of this plain is overspread with a deep layer of sand, alternating, however, with large clayey tracts and extensive marshes. A cold and humid atmosphere, a winter nearly as severe as that of Sweden, and violent winds, blowing uninterruptedly over this wide open region, are consequences of this physical structure and position.

The rivers of Poland are large, long, and navigable; seldom obstructed by rocks or cataracts. They frequently overflow their low banks, and convert the neighbouring provinces into a sea, communicating to them a luxuriant fertility. They rise, generally, not from mountain chains, but from marshy plains in the interior of the kingdom; and a plateau of almost insensible elevation separates those which direct their courses to the Baltic, from those which flow to the Black Sea. The Vistula, however, the most important and the most decidedly Polish, rises in the mountainous frontier of Silesia, passes Cracow, and, by a winding course to the west and north, reaches Warsaw, where it is augmented by the copious united streams of the Bug and the Narew, flowing from the rich plains to the eastward. It then holds a course almost due north; and, after passing Thorn, enters the sea by two mouths, one of which forms the Frische Haff, the other the great commercial port of Dantzic. The Vistula has a course of upwards of 500 miles, and is one of the most commercial rivers in Europe, being the main channel through which all the produce of Poland passes. The Niemen, more easterly, has almost as long a course; but the poor tracts of Lithuania, through which it flows, afford a much smaller amount of valuable commodities to be brought down to the port of Memel. The Dwina, though not quite so long, is a more valuable river, but, with its port of Riga, is almost entirely Russian. The Dnieper rises amid the marshes in the heart of Poland, and communicates, during the flood, with some of the tributaries of the Vistula; but the greater part of its long course is through Russia. The Dniester also rises from the Carpathians, and waters part of Austrian Poland before it becomes Russian. Even the Pruth, the present boundary of the Russian and Turkish empires, takes its rise in Poland.

The marshes of Poland can scarcely be dignified with the name of lakes; though they are extensive, and in the wet season some of the interior provinces almost resemble a sea. Several extensive *haffs*, partaking of the character of lake and bay, occur on the shores of the Baltic, at the mouths of the great rivers.

SECT. II.—*Natural Geography.*

SUBSECT. 1.—*Geology.*

The geology of this country is described with that of Russia.

SUBSECT. 2.—*Botany.*

Poland, from its situation, and, as may be judged, also, from the nature of the surface of that country, has no peculiar vegetation. The plants it produces are scarcely in any way different from those of the territories which circumscribe it; of Germany on the one hand, and of Russia on the other. It may have political, but it has no natural boundaries.

SUBSECT. 3.—*Zoology.*

The zoology of Poland is essentially the same as that of central Europe, and need not therefore be here dwelt upon. The pigs, like those of Russia, are generally very small, and of a reddish colour.

SECT. III.—*Historical Geography.*

Poland, in ancient times, formed the chief portion of that vast plain, called by the Romans Sarmatia, and viewed by them as a still ruder and more barbarous region than Germany. Sarmatia and Scythia are, in their descriptions, always combined together, as the abode of nomadic and savage tribes. The Roman arms penetrated to no part of this immense plain. From the earliest era to which our records ascend, it appears to have been peopled by the tribes called Sclavonic; a race widely diffused, distinguished by a peculiar language, by a strong national feeling, and by a particular train of superstitious ideas. Though shepherds, they do not seem to partake the migratory character of either the Teutonic or the Tartar nations. The impulses which actuated them were derived chiefly from the Huns, the Goths, and other nations of Asia, for whom their country was a path to the conquest of western Europe. The Sclavonic tribes were long held in the most cruel bondage by these eastern

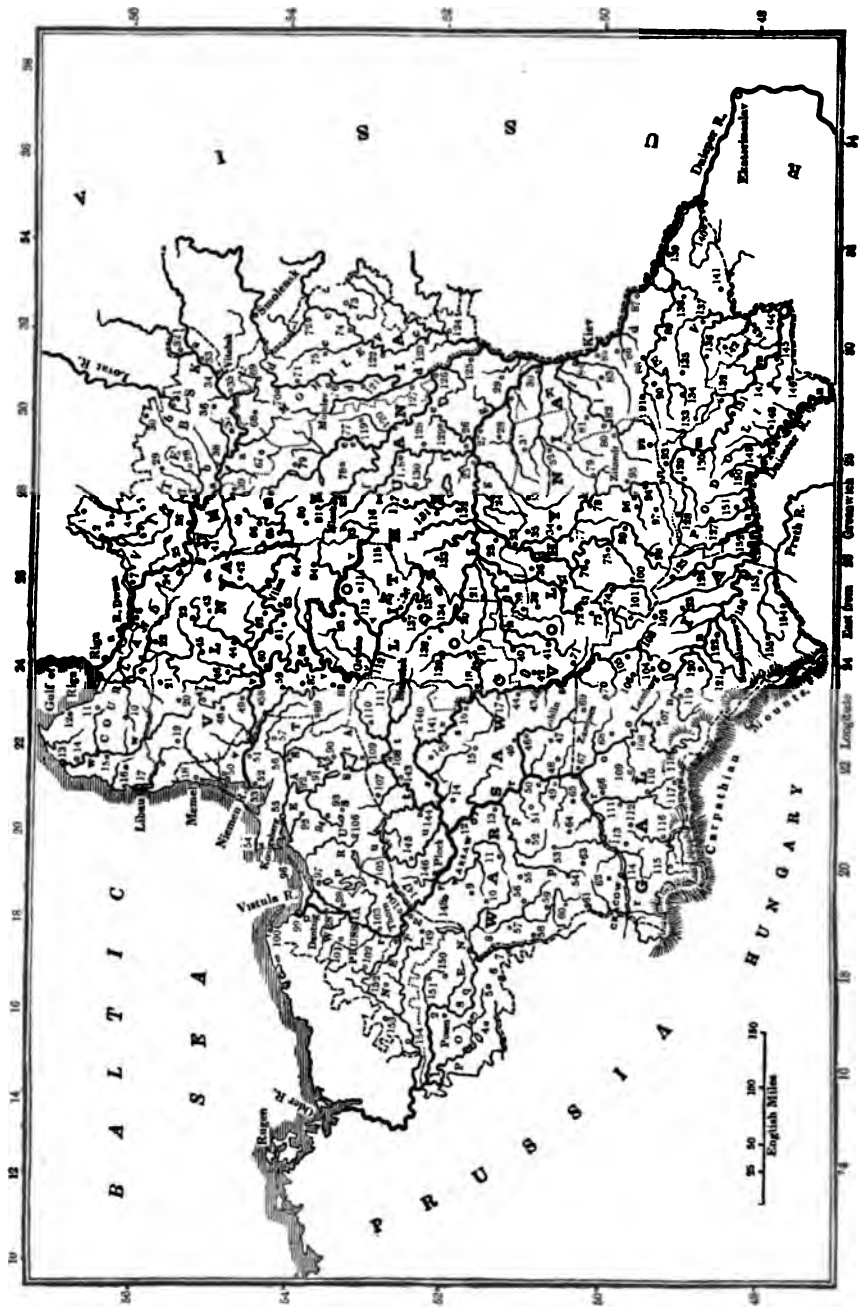
invaders; and their name was employed even to designate the most degraded state to which human nature can be reduced; but many ages have elapsed since they shook off this ignominious yoke.

The early annals of Poland are obscure, and possess little interest. In 999, Boleslaus assumed the title of king. The Poles continued a powerful and warlike nation, though dreadfully harassed, for several centuries, by the inroads of the Tartars. In the end of the fourteenth century, the country obtained a most important accession. Hedwig, the heiress of the crown, married Jagellon, grand duke of Lithuania, on condition of that prince embracing Christianity, and incorporating his dominions with those of Poland. Poland thus united, became one of the most powerful monarchies of Europe, and its martial character gave it a commanding influence. The exploits of Sigismund and Sobieski hold a conspicuous place in military history; and Poland, for two centuries, was the main bulwark of Christendom against the alarming progress of Turkish invasion.

The decline of Poland may be dated from the beginning of the last century, and may be ascribed partly to the improvement and augmented influence of Russia and Prussia, but in a far greater degree to the incurable defects in the constitution of the state. The nobles, about 500,000 in number, formed the nation; the rest of the inhabitants being slaves, incapable of acquiring any property in land, without any privileges, and sold, like cattle, with the estates to which they belonged. After the extinction of the princes of the Jagellon line, the power of the nobles became quite illimitable: each of them might aspire to the throne, the sovereign being merely the first citizen of the order. Among themselves they formed a perfect democracy, the poorest being, in respect of privileges, quite on a level with the most opulent. They were authorised to maintain troops and fortresses; and were rather, indeed, a sort of independent princes than the subject of a constitutional monarchy. By a singular absurdity, any one noble might, by interposing his *veto*, suspend the whole deliberations of the diet, and prevent the possibility of their coming to any conclusion. Hence the country was the constant theatre of intestine commotion; and foreign influence and corruption had unbounded scope, not only at the election of sovereigns, but in the whole proceedings of the diets. How much soever we may detest the means by which it was effected, no one can regret the abolition of a system of government which combined all the mischiefs of anarchy without its stimulus to enterprise; which made every landlord a petty despot, and every cultivator a slave.

The partition of Poland, justly regarded as one of the most iniquitous measures which have disgraced modern times, was begun in 1772, by Frederick II. of Prussia, and the Empress Catharine II., chiefly, it is believed, at the suggestion of the latter; while Austria was reluctantly dragged into the league. At this time, however, each cut off only a corner, to round their own territories, and Poland remained still extensive, and nearly entire. But nothing was done to repair the defects in the constitution; and the weakness and disunion that prevailed left the country as open as ever to foreign aggression. In 1792, the three powers again joined, and made a fresh partition, which reduced Poland to little more than half her original dimensions. She now roused herself, and made a glorious effort for her deliverance. She saw, and endeavoured, though too late, to obviate those abuses in her system of government of which she had been the victim. But the partitioning powers had gone too far to recede, and were not to be disappointed of their prey. The Poles, under their hero Kosciusko, made the most gallant efforts to preserve their independence and their newly acquired liberties. Unfortunately, however, their exertions were unavailing. They were overpowered by the energies of Suwarrow, and the valour and number of his troops. The Russian general marched direct upon the capital, and, storming the fortress of Praga, to which the patriots had retired as their last hold, extinguished, apparently for ever, the rights and glories of Poland. An entire and final partition was then made, in which Russia had by far the most extensive portion; Prussia, the best situated and most commercial; Austria, on the whole, the most productive.

Considerable vicissitudes have befallen Poland since this attempt finally to fix its destiny. Napoleon, after his great victory at Jena, penetrated into the country, and obtained the cession of all which had been given to Prussia at the period of the partition. He erected it into the Duchy of Warsaw, and vested it in the house of Saxony, who had reigned for a considerable time as elective kings of Poland. In his next grand expedition, destined finally to humble the power of Russia, the design of restoring Poland to its existence as a kingdom was openly proclaimed. It was hailed by the Poles, and even by their hero Kosciusko; and, in supporting it, they displayed, on several occasions, a valour worthy of the most glorious eras of their monarchy. Napoleon, had he conquered, might here have found cordial and attached subjects of his empire. Amid the downfall of his whole usurped power, and the liberation of Europe from the universal monarchy with which it was threatened, the relapse of Poland under its old oppressors was a solitary evil, which was scarcely perceived. The spirit which had been displayed by the Polish nation procured some melioration of its lot. The sovereigns felt that they could not trample with impunity on the feelings of so great and brave a people. Alexander formed the central regions on the Vistula and Bug into a


RUSSIA
PRUSSIA
HUNGARY
BALTIC SEA
Vistula R.
Dniester R.
Carpathian Mts.
English Miles

separate state, to which he gave the lost, but still fondly cherished, name of the kingdom of Poland. Austria and Prussia were forced to grant to their portions certain privileges, and a form of representative government before withheld. A recent and gallant attempt of Poland to regain her independence has had a disastrous issue.

Sect. II.—*Political Geography.*

The political existence of Poland as a great independent kingdom was finally extinguished by the last fatal partition. The name of the country, however, and the memory of its ancient glories, still live among the people of Poland; and an opportunity to renew its political existence would, it has appeared, be eagerly embraced.

Among the three partitioning powers, Russia availed herself of her own strength and favourable circumstances to seize a most unequal and preponderant share. Instructed, however, by the events of the last war, and the spirit displayed by the Polish people, she afterwards affected to pursue a liberal and conciliatory course. The fallen and proscribed name of Poland was revived, and the shadow of their ancient diet was still fondly cherished.

The modern kingdom on which Alexander vouchsafed to confer the name of *Poland*, comprises only a small, but fine and fertile, portion of that once mighty monarchy; the rich and cultivated banks of the Vistula, the Bug, and the Narew. In 1829 it contained, on a surface of 48,000 square miles, a population of 4,088,000. A certain form of representation was granted to this kingdom, including even provincial assemblies, which sent their deputies to the general diets; but a body which deliberated under the eye of 30,000 foreign troops could enjoy only a precarious exercise of its functions. Yet they did not hesitate to break forth into daring flights, such as their proud ancestors were wont to indulge in; occurrences which soon gave disgust to the emperor, who had granted these privileges under the hope of their being exercised in a very different spirit. The freedom of the press, also, which he at first made a show of granting, was soon employed in a manner so little congenial to his views, that he determined to withdraw it, and restore the abolished censorship. Upon the whole, however, in consequence of this imperfect freedom, the privileges of the different orders were better respected, and property more secure, than in any other part of Poland. [By an ukase of 1832, Poland was incorporated with the Russian empire, with a distinct administration conducted by a governor-general (namiesnik), and a council of state.—Am. Ed.]

References to the Map of Poland.

NORTH PART.

1. Lipna
2. Naalt
3. Beltinovo
4. Malnovo
5. Liutzin
6. Rejitza
7. Glazmans
8. Frederickstadt
9. Bausk
10. Bekgof
11. Tukum
12. Ugenzem
13. Windau
14. Pilten
15. Goldingen
16. Tazeopol
17. Libau
18. Memel
19. Telsh
20. Shavli
21. Janishky
22. Birji
23. Svidotzi
24. Vesen
25. Dinaburg
26. Pridruisk
27. Drissa
28. Zapolitza
29. Sebe
30. Yazna
31. Nevel
32. Veleika
33. Vielze
34. Seraz
35. Vitepsk
36. Gorodock
37. Kurilov
38. Polotzk
39. Ulino
40. Glubskoe
41. Braslav
42. Zventziani
43. Utzian
44. Vilkomir
45. Ponevieg
46. Kiedan
47. Pakopo
48. Rossien
49. Wielona
50. Hoydekrug
51. Tilsit
52. Mehlaucken
53. Curische Haff
54. Dirschkeim
55. Konigsberg
56. Insterburg
57. Kussen
58. Szaky
59. Neustadt
60. Kovno
61. Nov Troki
62. Resha
63. Wilna
64. Smorgoni
65. Veleika
66. Retchki
67. N. Lepel
68. Sienno
69. Babinovitchi
70. Orsha
71. Kopis
72. Malistayl
73. Klimovitchi
74. Tcherikov
75. Tchassi
76. Mohilev
77. Yakshitzi
78. Igumen
79. Kastchini
80. Radoskowicz
81. Gorodow
82. Minsk
83. Koidanov
84. Losk
85. Lida
86. Daugi
87. Marienpol
88. Kapezewo
89. Przecozlen
90. Lotzen
91. Gerdauen
92. Friedland
93. Wartenburg
94. Heilsberg
95. Eylau
96. Prische Haff
97. Elbing
98. Marienwerder
99. Dantzic
100. Grossendorf
101. Neuenburg
102. Tuchel
103. Culm
104. Thorn
105. Neumark
106. Allenstein
107. Chorzzellen
108. Nowogrod
109. Johannisburg
110. Goniadz
111. Bialystok
112. Grodno
113. Bielitza
114. Novogrodek
115. Nesvig
116. Pesotchna
117. Sloutzk
118. Gorodock
119. Klitchev
120. Bobrouisk
121. St. Bichov
122. Glinka
123. Sviatilovitchi
124. Bielitza
125. Cholmitch
126. Gorval
127. Jiobin
128. Zelenkovitza
129. Koreni
130. Ouristche
131. Morstskoi
132. Lenino
133. Linbashev
134. Beriuza
135. Bilien
136. Zamostze
137. Slonim
138. Seletzi
139. Proujani
140. Rudika
141. Siemiatycze
142. Vengrow
143. Ostrolenka
144. Pultusk
145. Radzanowo
146. Plock
147. Sierpe
148. Brzese
149. Inoraclaw
150. Gnesen
151. Rogowo
152. Lobsenz
153. Crone
154. Filchne.

SOUTH PART.

1. Schwerin
2. Posen
3. Czempin
4. Lissa
5. Jarocsewo
6. Sduny
7. Grabov
8. Kalisc
9. Kutno
10. Leoczye
11. Rawa
12. Warsaw
13. Warka
14. Radzimin
15. Seltze
16. Yanav
17. Channa
18. Brest Litov
19. Kobrin
20. Bezlej
21. Ekloshi
22. Stolin
23. Visotsk
24. Gorka
25. Petrikov
26. Biesedka
27. Mozir
28. Esk
29. Bragin
30. Tchernobil
31. Ouvrouteh
32. Tzenalpol
33. Olevsk
34. Golishi
35. Sekki
36. Bladimiretz
37. Kolki
38. Manevitchi
39. Clevifka
40. Ratno
41. Kovel
42. Svitiaj
43. Uzruisk
44. Vlodava
45. Kotzkerniki
46. Lybartov
47. Lublin
48. Ujendov
49. Seletz
50. Gora
51. Radom
52. Opotchno
53. Mnin
54. Konietzpol
55. Petrikau
56. Widawa
57. Sieradz
58. Boleslavicz
59. Dzialoszyn
60. Tchenstochov
61. Sawiercz
62. Moravitza
63. Sioskoe
64. Keltze
65. Opatov
66. Zuchov
67. Radomist
68. Turnograd
69. Zamosc
70. Tomashov
71. Vladimir
72. Loutzk
73. Lavrovo
74. Dubno
75. Ostrog
76. Rovno
77. Lydvipol
78. Novgrad Volinsk
79. Sokolov
80. Zitomir
81. Pajov
82. Semorde
83. Molijin
84. Dumidovka
85. Kiev
86. Vasilkov
87. Kanev
88. Tzerkov
89. Tarastcha
90. Skvira
91. Pavolotch
92. Rai Gorodock
93. Kimielnik
94. Tchernov
95. Oulkha
96. Laboun
97. Constantinov
98. Toefipol
99. Zaslav
100. Kremenetz
101. Brody
102. Zlotchav
103. Busk
104. Lemberg
105. Augustrov
106. Zolkiew
107. Przemisl
108. Przeworsk
109. Przeszov
110. Vasiso
111. Pilsno
112. Tarnow
113. Briesko
114. Cracow
115. Nowytarg
116. Sandecz
117. Dukla
118. Sanok
119. Sambor
120. Stry
121. Perigensk
122. Kalusz
123. Brezanti
124. Tolovice
125. Tarnopol
126. Struchov
127. Kobim
128. Praskurov
129. Letitchev
130. Vinitza
131. Bratzlav
132. Gnisin
133. Lipovetz
134. Jivotov
135. Piatigori
136. Sokolovka
137. Zvenigorodka
138. Olishana
139. Teherkask
140. Tchigrin
141. Shpola
142. Ouman
143. Golovanevsk
144. Bogopol
145. Savrah
146. Balta
147. Olgopol
148. Yampol
149. Mohilev
150. Verbovetz
151. Kamenetz
152. Zaleszick
153. Sniatin
154. Kuti
155. Delatyn
156. Stanialawow

Rivers.

a Dwina
b Disha
c Sosa
d Dnieper
e Beresina
f Pilitch
g Pripet
h Strochod
i Stir
j Balavaka
k Stoutch
l Telerev
m Boug, or Bug
n Dniester
o San
p Pilica
q Wartz
r Vistula
s Bug
t Narew
u Wukra
v Niemen
w Windau

Gallicia, the name which Austria gives to her portion of Poland, has also a form of representation, though, in compliance with the temper of the Austrian government, it rests on a much narrower basis. The states consist of four orders; the clergy, the nobles, the knights, and the representatives of cities: they meet annually; but the imposition of taxes, and the making of laws, the two primary functions of a national assembly, do not lie within their competence. They are allowed, however, some concern in the distribution of the land-tax, and the mode of levying the troops; though the amount of both is fixed by the sole will of the sovereign. The revenues of Gallicia are estimated at about 10,000,000 guilders, of which the extensive salt-mines furnish one of the most copious sources.

Prussian Poland is now reduced to the grand duchy of Posen, by no means the most fertile or productive part of the kingdom, but valuable from the manner in which it consolidates and connects the detached parts of that scattered monarchy. The people have obtained provincial states, on the same footing as the other parts of the Prussian dominions. The representation is chiefly of the landed interest, and the king agrees that he will not make any alteration in the laws or taxes without their consent; but any proposed change must originate with him; and, as the debates do not take place in public, we have yet little opportunity to judge of the working of the new system thus established.

SECT. V.—*Productive Industry.*

The industry of Poland is in a more rude and infant state than that of any other country in Europe, some parts of Russia and Turkey alone excepted.

Agriculture, the first and simplest form of industry, is that by which alone Poland provides for herself both the necessaries and luxuries of life. Almost every part of the country is under culture; and the plains of Volhynia, Podolia, and of the Upper Vistula, produce good crops of the finest wheat in Europe. This abundance, however, is not the result of any skilful or intelligent labour, or judicious application of capital. The cultivators, within the period of fifty, and in some cases twenty years, were bondmen fixed to the glebe, and toiling in a mechanical round for the profit of their masters. Though now raised to the rank of free labourers, and in many cases having received even a permanent interest in the soil, they have not yet acquired the character suited to this new station, but continue nearly in the same degrading dependence on their landlords as formerly. Each peasant is a species of little farmer, cultivating a small spot with his own hands, and paying the rent partly in kind, and partly in personal service. Wheat is cultivated chiefly on speculation, to supply the richer countries of Europe. In the country where this fine wheat is produced, the body of the people never taste it; and the traveller who passes through Poland can scarcely, unless in the great cities, obtain a loaf of wheaten bread. Rye is the grain almost exclusively cultivated for national subsistence. Hence it is always sure of a market, though at a low rate; but wheat depends upon the state of foreign markets for bringing any price at all. It is raised only on the finest parts of the land; and does not, in Mr. Jacob's opinion, occupy more than one acre in ten. Yet it is to the sale of this wheat that the grandees almost exclusively look for a supply of money, and, through it, of the finer manufactures and foreign luxuries. The recent depression in the prices of grain, and its exclusion for some years from the markets of Britain, reduced the Polish landlords to extreme distress; and, in order to relieve themselves from embarrassment, they adopted a system of over-cropping, which Mr. Jacob suspects has seriously injured the fertility of many of the lands. But, latterly, the exports from Poland to Britain have again become very great. In 1830 no fewer than 404,000 quarters of wheat were exported from Dantzic, of which 311,000 were for England; and during 1831 the amount was still more considerable.

Manufactures are in a state decidedly inferior to that of agriculture. Even the rude fabrics which are almost everywhere else carried on for domestic use, are wanting in some districts. In others, however, they are conducted with some diligence; particularly in the countries on the Vistula, and those belonging to Prussia. In them, coarse but good linen is made, to an extent which affords a surplus for exportation. Within the last few years the manufacture of woollen cloth has remarkably increased in the new kingdom of Poland. In 1830, it produced 7,000,000 yards, part of which was sent as far as China. The timber, with which the country is so largely covered, affords ample materials for cabinet and wood-work; and this, in the mountain districts, is carried on under its ruder forms; but in the cities are fabricated articles of a more elegant and splendid nature. The manufacture of coaches at Warsaw is extensive, finding a ready market from the pomp and profusion of the Polish nobles.

The chief and almost only mineral production of Poland is salt, the deposit of which in the southern provinces is the most copious in Europe, and the mines are more extensively worked than any other in the world. The Carpathian mountains contain also some iron; but the metallic wealth of Poland is, on the whole, unimportant.

Commerce in Poland is carried on with some activity, in consequence of the large surplus of rude produce to be disposed of, and the many foreign fabrics and luxuries of which the country stands in need. Its grain and timber are transported along the rivers;—by the

Dwina, to Riga; by the Niemen, to Memel and Liebau; and, above all, by the Vistula, to Dantzic and Elbing. Dantzic is the great emporium of Polish grain, of which it usually contains large magazines. There is a large moneyed interest in Poland, entirely in the hands of the Jews, who have made such large advances to the distressed nobles, that they may be considered the real proprietors of a great part of the lands. They carry on, also, most of the little trade and handicraft which exists throughout Poland.

Sect. VI.—*Civil and Social State.*

The extent and population of Poland, in 1825, were estimated, in Plater's elaborate Geography of the East of Europe, as follows: they have since somewhat increased:—

	German Square Miles.	Inhabitants.
1. Old Polish Prussia	500	800,000
2. Grand Duchy of Posen	540	980,000
3. Gallicia	1,500	4,000,000
4. Republic of Cracow	20	110,000
5. Kingdom of Poland	2,970	3,700,000
6. Russian Poland	7,600	8,800,000
7. Courland	450	600,000
	12,980	18,990,000

The Poles, as already observed, belong to the Sclavonic race, which occupies nearly the whole extent of the vast plains of eastern Europe. They have emerged more than the others from the generally rude and unimproved state which characterises this race; remaining, however, far in the rear of the Teutonic and other western nations. The feudal system, broken up in the greater part of western Europe, exists here in almost undiminished operation. Society consists altogether of two distinct and distant orders, the nobles and the peasantry, without any intermediate degrees. The nobles, who are more numerous than in any other country in Europe, have always, in the eye of the public, formed the people of Poland. They are brave, prompt, frank, hospitable, and gay. They have been called the French of the north, and, both from habits and political connection, are attached to that nation. On the contrary, they regard the Germans with mingled contempt and aversion, calling them *Niemic*, or dumb, in contrast with their own fluency and loquacity. Before their fall, their neighbours called them "the proud Poles." They consider it the deepest disgrace to practise any profession, even law or medicine; and, in case of utmost necessity, even prefer the plough. The luxury of modern times, and the variations in the price of grain, have very generally involved them in pecuniary embarrassments, and placed many of their fortunes in the hands of Jews. The Jews, sober, industrious, parsimonious, crafty, form a numerous and separate people in the heart of Poland. Once a year occur what are called the Polish contracts, when the nobles repair to the principal towns, Kiev, Minsk, Warsaw, Wilna, Novogrodek, &c. to sell their lands, pay their interest, and negotiate all their money transactions. Hither their wives and daughters resort for amusement; speculators bring their wares; usurers, musicians, strolling-players, sharpers, courtesans, come to ply their respective trades. The Poles, in personal appearance, are handsome and vigorous, though subject to that loathsome and sometimes dangerous disorder called the *plica polonica*. The Polish ladies are celebrated for their beauty, and are considered also more intelligent and agreeable than those of Russia. The peasantry are not absolute slaves, but they are raised little above that degrading condition; an estate being usually estimated by the number of its peasants.

The religion of Poland, contrary to that which prevails in the great body of the Sclavonic nations, is Roman Catholic. This is, perhaps, one main cause of higher civilization; for the Catholic religion is more favourable to intelligence and improvement than that of the Greek church. Preaching has always formed an essential part of its worship, which gives it a decided superiority over a system which excludes that mode of instruction, and deals merely in a round of childish ceremonies. There is a considerable number of Greek Christians on the eastern and southern frontiers of Poland; and the numerous body of the Jews, of course, profess their national faith.

Knowledge has made greater progress in Poland than in any other of the Sclavonic nations. In the brilliant eras of Casimir and Sobieski, she produced men eminent in science, among whom we distinguish Copernicus, the discoverer of the true system of the world. Hosius, advanced to the dignity of president of the Council of Trent, enjoyed, in his own day, a high reputation. Strangers to the language of the more enlightened western nations, the Poles have acquired the talent of speaking and writing Latin with peculiar facility. Nowhere has national history been more diligently cultivated. Every great family keeps a chronicle, in which it records the public and private incidents that have come under its observation, and bequeaths them as a legacy to future generations. A very poetical spirit animates the Poles, and is diffused through all ranks. The peasant sings the beauties of rural nature, while the noble bards celebrate the fortunes and glories of their country. Poland, however, within the last two centuries, has not kept pace with the rapid strides which other nations have

taken in science and literature. The authorities of Aristotle and of Albertus Magnus still predominate in its schools of philosophy: its separation from Germany, and its distance from the other literary nations, prevent it from fully imbibing their spirit. Yet the Poles enumerate several living authors, whom they consider as vying with the classic names of the western countries, though their fame has not yet made its way beyond the limits of Poland itself.

The universities of Poland have enjoyed considerable reputation; that of Cracow, three centuries ago, was one of the most flourishing in Europe: it not only attracted crowds of native students, but drew others from all the neighbouring kingdoms. The distracted state of the country, with the rising reputation of the German seminaries, gradually thinned their number; and the final blow was struck by its subjection to Austria, which introduced the German language, of all other things the most abhorrent to the Poles. A revival seemed to be promised, by the arrangement which fixed Cracow as an independent republic; but this expectation has not yet been fulfilled. The emperor Alexander founded, in 1821, a university at Warsaw, which he endowed with a revenue of 35,200 Polish florins, supporting an establishment of forty-two professors. It was attended, in 1830, by 589 students.* Another, in 1820, had been formed at Wilna, also well endowed and regulated; and containing, in its dependent gymnasia, no less than 433 teachers. The university of Leopol, in Gallicia, is entirely German. Amid all these aids, however, knowledge is still far from being widely diffused among the body of the people.

The fine arts of architecture, painting, and statuary, can scarcely be said to exist in Poland. Some of the carvings in the middle ages are said to possess a degree of merit; but no modern artist has given lustre to the kingdom. Music, on the contrary, is cultivated with ardour and success; though it is the performers, rather than the composers, of Poland that have attained distinction.

The amusements and mode of life among the higher ranks are chiefly copied from the other nations of Europe, particularly the French. The Polish dances, however, are strictly national, and very graceful. That, especially, called the Polonaise is marked by a slow majesty of movement, which has been remarked as worthy of a nation who elected their kings. The Poles have a singular manner of shaving the head, leaving only a tuft of hair on the crown, and mustachios are generally worn.

SECT. VII.—*Local Geography.*

The local description of Poland, in its present dismembered state, must necessarily be given according to the three portions now held in such wide separation from each other:—1. Prussian Poland, with which we shall combine Ducal Prussia; 2. Austrian Poland, which has received the name of Gallicia; 3. Russian Poland, including the recently abolished kingdom of Poland.

SUBSECT. 1.—*Prussian Poland, with Ducal Prussia.*

The province of Prussia forms an extensive range of sea-coast, describing a sort of semicircle of nearly 400 miles round the southern shore of the Baltic, and extending from 50 to 100 miles into the interior. The whole is a continuous and almost dead level, scarcely rising above the surface of the water on which it borders. Only in the south-east quarter appear a few sand-hills, blown together by the winds: one of them rises to 500 feet, but none of the others attain half that elevation. Yet, in the absence of any real mountains, these are called by the natives Berge. A range of such sand-hills, or banks, defends the flat coast from the incursions of the sea. In the western part there are a few similar mountains, and the river banks are somewhat higher than the rest of the country; while there is a gradual, but insensible, rise from the shore to the interior. The lands near the coast, however, would be scarcely secure from inundation, were not the sea itself so extremely shallow. Prussia has scarcely any important rivers exclusively its own, the Pregel forming almost the only exception; but the Vistula and the Niemen, or Memel, after traversing some of the finest provinces of Poland, enter the sea within its territory, and thus afford ample range both for foreign and interior trade. Two extensive waters, called haffs, the Frische Haff and the Curische Haff, exist in an intermediate state between lakes and bays. They form long canals, separated from the sea by a narrow partition. The water is fresh; and it is only when the waves of the Baltic are impelled into them by high tides or storms, that a saline tincture is communicated.

Prussian industry is divided between agriculture and commerce; manufactures being yet in their infancy. The soil is in many places sandy and marshy; yet there are few parts which are not fit either for grain, flax, or hemp, and many tracts are very productive. The former province of West Prussia, however, which remained, till 1772, under the Polish régime, is much behind in respect to cultivation, though considerable improvement has taken place since its annexation to Prussia. The cattle are numerous, and the breeds in general

* [Suppressed by an imperial ukase in 1832.—AM. ED.]

good: that of horses, in some parts of East Prussia, is extremely fine. The breeding of cattle, however, seems to have declined remarkably, since the disastrous year 1806; the number, which, in 1807, was 228,800, having fallen, in 1812 and 1813, to 151,560. The sheep cannot be compared with the fine breeds of Silesia and Saxony, but a good deal has lately been done to improve them. Hogs are reared in very great numbers; and honey is also a copious article. The woods are very extensive, covering, in East Prussia, upwards of 3,000,000, and in West Prussia more than 2,000,000 acres; and their products, timber, pitch, tar, ashes, form an important branch of national wealth. Amidst the generally low state of manufactures, that of coarse woollens, for domestic use, is extensively carried on; flax is well spun, and exported in the shape of yarn; and the tanning of leather flourishes. The commerce of Prussia is extensive; her ports and rivers affording the chief outlet for the copious productions of the soil of Poland. Memel, Königsberg, Elbing, and, above all, Dantzic, rank with the most flourishing commercial places in Europe. The chief staple of export is grain, in large quantities, and of the finest quality; wood, potashes, linen yarn, leather, hemp; in return for which, they receive the fine manufactures, wine, colonial produce, and all the luxuries of life.

The population of East Prussia is stated by Jacob to have amounted, in 1827, to 1,171,000; that of West Prussia to 752,000. The former country has a character almost entirely German: the religion is Lutheran, with only about a sixth of Catholics, and a very few Jews. The means of knowledge and instruction are very widely diffused, and accessible to all ranks. In West Prussia, on the contrary, the two religions are nearly equally divided, most of the Polish population being Catholic; there are upwards of 12,000 Jews, and the same number of Anabaptists.

Königsberg, the capital of East Prussia, and formerly of the Prussian monarchy, is advantageously situated on the Pregel, not far from its junction with the Frische Haff. It is divided into three principal parts, the Old City, the Lobenicht, and the island of Kneiphof, where a considerable number of the houses are built on piles, as in Venice and Amsterdam. The walls are nine miles in circuit: a great proportion of the space enclosed by them, however, consists of open ground; but they no longer render Königsberg a strong place, and the citadel of Fredericksburg, in the island, is now covered with shops. Beyond the walls are four suburbs. The university is well endowed, and attended by 200 or 250 students. All the manufactures that exist in the country are concentrated at Königsberg; and they are various, though none of them extensive. Königsberg was an eminent Hanse town, and still carries on a very extensive trade. It contains 63,000 inhabitants. In 1816 were laden here 634 ships, of which 491 took 23,000 lasts of grain. Kant, the celebrated metaphysician, was a native of this city.

Of the other towns of East Prussia, one of the most considerable is Memel, strongly fortified, and which, notwithstanding its smaller size, carries on nearly as great a trade. In 1828, 869 vessels entered, and nearly the same number cleared out. Of the ships entering inwards in 1828, no fewer than 428 were British. Pillau, on a channel somewhat more than half a mile broad, serves as a sort of subsidiary haven to Königsberg. In 1820 it received 623 vessels, of 43,675 tons burthen, and sent out 638, of 46,292 tons burthen. Braunsberg, near the mouth of the Passarge, exports a large quantity of linen yarn, with masts and corn. Tilsit, on the Niemen, is rather a handsome and considerable town, with some manufactures; but is chiefly remarkable for the treaty of 1807, between Napoleon and Alexander. Gumbinnen and Insterburg, both on the Pregel, are considerable towns. Friedland and Preuss-Eylau deserve mention, chiefly for the great battles fought there in the campaigns of 1806 and 1807.

Dantzic, the grand emporium of Poland, stands undoubtedly foremost among the towns of Western Prussia. It lies on the western branch of the Vistula, immediately before its entrance into the sea, at the point where it receives two small tributaries, the Raddau and the Mollen. Dantzic is divided into a number of parts, of which the principal are the Old City, ill built, wholly in the style of the middle ages, with narrow, gloomy, angular streets; the "High City," as it is called, more modern, and better built, but still far from handsome; the "Low City," divided into the Long Garden, which contains the best and most agreeable houses, and the Magazine Island, containing, as its name imports, the chief warehouses of the merchants. The suburbs were, till lately, extensive, one of them being named Old Scotland, from a colony of that nation established at an early period. These suburbs were burned, however, in the sieges by the French, in 1807, and the Russians, in 1813; and, though partly rebuilt, their population has been reduced from 7860 to 1788. The only handsome building is the Lutheran church, with a celebrated picture of the Last Judgment. The commerce of Dantzic is very great. In 1828, 1050 ships entered the port, of the burthen of 101,234 tons; of which, 211 ships, carrying 30,095 tons, were from England. During the last three or four years, this commerce has increased still further. As already observed, the exports of wheat from Dantzic, in 1830, were 404,000 quarters, of which three-fourths were for England. Between 1807 and 1814, it is estimated to have suffered a loss of 62,500,000 guilders (5,250,000*l.*). The population, in 1817, was 52,821, including the mili-

tary: but, independent of them, was 47,984. At present it may amount to 60,000. Dantzic has a public library of 27,000 volumes, and also several literary institutions.

Other towns in West Prussia are, Elbing, on the river of its own name, which falls into the Frische Haff. Though not nearly equal to Dantzic in respect of foreign trade, it carries on a very extensive interior traffic; and about 1400 vessels, though of comparatively small size, enter and leave its port. It is a fortress, though not now of much importance. Thorn is a considerable city, about an hundred miles up the Vistula, once very strong, and celebrated as the birthplace of Copernicus. Marienburg and Marienwerder are capitals of circles, and places of some consequence.

Posen, bearing the title of grand duchy, is now the principal part of the Polish territory annexed to Prussia. It forms an extensive level plain, analogous in all its features to that which crosses the whole north of Europe. The country is finely watered, having the Vistula for its eastern boundary; while the Wartha, receiving the considerable tributaries of the Netze and the Obra, traverses it from east to west, enters Germany, and falls into the Oder at Kustrin. The canal of Bromberg unites the Vistula with the Netze, and, consequently, gives it a communication with the Oder. Agriculture is in a very backward state, and conducted only according to antiquated processes. The peasantry have been freed from personal slavery, but they are still ignorant, drunken, and poor. Yet Posen yields a considerable surplus of grain, which is transported, partly to Dantzic, by the Vistula, and partly, by the Oder, to Stettin. The produce in cattle and sheep, which was once most extensive, has suffered severely from the repeated ravage of hostile armies; yet a considerable quantity is still furnished to Silesia. Although this cannot be considered a manufacturing district, yet it fabricates a considerable quantity of coarse woollen and linen cloth, which is even sent to Russia and Germany. The inhabitants, who are estimated by Hoffmann at 847,000, are divided, as to religion, into 553,000 Catholics, 238,000 Lutherans, 52,500 Jews, with some minor sects. According to Mr. Jacob, the governments of Posen and Bromberg had risen, in 1827, to 1,045,000. The heads of the Catholic church are the archbishop of Gnesna and the bishop of Posen. The establishments for public instruction are yet in their infancy.

Posen is a large town, on the Wartha, well and regularly built, with broad streets, and a spacious market-place. Population, 25,000. There are several handsome private houses, both in the city and in a spacious suburb on the opposite side of the river. The chief public buildings are, the Stanislaus church, built in the Italian style; the bishop's palace, and the theatre. The governor, who, under the title of stadtholder, represents the king, resides at Posen. The city contains 4000 Jews, and a number of families who report themselves as descended from English and Scotch ancestors. The Catholics have a gymnasium, with 500 scholars.

The other towns of Posen are, in general, small. Gnesna, formerly a city of great importance, and the ecclesiastical capital of Poland, does not now contain four thousand inhabitants. Lissa is now a large place, with pretty extensive manufactures, and a population of 7934, half composed of Jews. Bromberg, on the canal which bears its name, enjoys a considerable trade.

SUBSECT. 2.—*Austrian Poland.*

The portion of Poland annexed to Austria is erected into a kingdom, under the titles of Gallicia and Lodomiria. These names are derived from the ancient Russian principalities of Halicz and Wlodomir. Its surface is considerably distinguished from that flat marshy level which covers almost the whole of Poland. A great part of it is situated upon the slope of the Carpathian chain, which separates it from Hungary. This is, indeed, only a border range, all whose loftiest peaks are Hungarian; but branches or spurs from it cover a great part of Gallicia, before they descend to the great Polish level. The country is thus of very various character. A considerable part consists of mountain forest, the elevations of which do not, however, rise to more than 4000 or 5000 feet: many of the plains are sandy; but the greater portion, diversified by gentle hills, is of the most exuberant fertility; and, notwithstanding its imperfect cultivation, forms a sort of granary of the surrounding countries.

The various changes which this southern part of Poland has undergone have rendered it not so strictly Polish as some of the others. About the twelfth century it formed part of the Russian kingdom of Kiev, and bore in great part the name of Red Russia. When Kiev became Russian, Hungary, once united, but now separated from it, laid claim to the Polish provinces; but it had to contend with the Polish monarchy, then in the zenith of its power, under Boleslaus and his successors. After a struggle of several centuries, Hungary was compelled to cede these districts; though still, by a singular clause, reserving a certain claim to them. Maria Theresa, therefore, when she achieved the partition, could boast of a certain ancient right; and Hungary even claimed the incorporation of these new provinces, and a seat for their nobles in the diet; but the Austrian cabinet, however much disposed to avail themselves of the claim, did not choose to press it to this conclusion. The extent of

Austrian Poland has not been materially altered since the final partition in 1792. Austria has given to Gallicia a form of states, but without allowing them any voice in the making of laws, or in fixing the amount of taxes, though they have some control over their distribution. The states are composed of four orders; the clergy, the nobles, the knights, and the cities: but the Gallician House of Commons consists merely of two deputies from Lemberg, no other place having yet been raised to the rank of city.

The different branches of industry are in a less advanced state in Gallicia than in any any other part even of Poland. The peasantry are no longer in the legal condition of serfs; but the general poverty, sluggishness, and apathy, which prevail among this order, render them nearly as much as ever enthralled to their landlords, and strangers to every kind of improvement. Still the produce of corn on these fine plains is very considerable, being estimated by Blumenbach at 34,000,000 metzen, a large proportion of which is sent partly by the Vistula to Dantzic, and partly to the neighbouring districts of Hungary and Silesia. Although a great portion of Gallicia is particularly adapted to pasturage, yet the diligence of the people in rearing cattle, &c. is so slender, that not only the breeds are poor, but their amount does not correspond to the extent of pastures. The number of horses in 1817 was 311,000, which, unless in some studs formed by government, had few properties of the noble Polish breed; horned cattle 1,116,000, and sheep 480,000; not so many as are found in some of the small Saxon provinces. The woods are of considerable value, and some coarse articles of furniture are made out of them and exported. The hills enclose several thousand little lakes, or ponds, remarkably well stocked with fish. The country is infested with wild animals, which the Austrian government has been at great pains to extirpate. In 1812, premiums were paid on the carcasses of 10 bears and 2046 wolves. Manufactures even of the coarsest and most necessary articles are almost unknown to the native Gallician, who follows nothing but his plough and his horse, and leaves the care of clothing him to the Jews, who have multiplied in this kingdom more than in any other part even of Poland. They exceed 200,000, and have 294 synagogues. It is but fair to state that the Austrian influence, however violently and unjustly established, has been employed to introduce a certain improvement in all the above particulars.

The mineral kingdom affords one branch of industry in which Gallicia excels every other part of Europe, and of the world itself. The whole soil at a certain depth contains a mineral layer variously impregnated with salt. The two grand works are at Bochnia and Wieliczca, the former of which produces the finest salt; but the latter are the most extensive of any in Poland, or, indeed, perhaps in the world. They extend 6700 klaftern in length, 1100 in breadth, and reach to the depth of 750. The alleys and passages cut out in the solid salt present a brilliant and magical appearance. Some elegant little chapels, adorned with saints and crucifixes, are also cut out in the mineral; but it is said there is no truth in the current report that there are habitations for the workmen, though there are stables for the horses employed. Of the different kinds and qualities of salt, the purest is called crystal salt, appearing in the shape of cubes and prisms; another, called green salt, contains a large proportion of earth; while the most inferior kind is fit only for cattle. These two great salt mines produce annually upwards of 800,000 cwt.; besides which there are twenty-six on a smaller scale, yielding about 900,000 cwt.

The commerce of Gallicia is necessarily inland. Occupying, however, the heads of the Dniester and the Vistula, it sends a considerable quantity of commodities down those rivers. It has also a great inland carrying trade, being the principal channel by which intercourse is maintained between Germany and Prussia. The exports consist of grain, salt, some wood, and honey; in exchange for which are received manufactured goods of every description, and exotic luxuries of every denomination. The quantity of these must be somewhat strictly limited by the means of purchase, and the small number who consume more than the absolute necessaries of life; yet the German politicians labour under some dread of an unfavourable balance.

The social state of Gallicia presents an aspect less altered from the feudal system and habits, than that of almost any other European region. The census of 1818 gave 3,760,000, while in 1829 it is stated by Colonel Traux at 4,385,000. These inhabited ninety-five cities, 191 market towns, and 6009 villages. The nobles amounted in 1817 to the enormous number of 31,006; some of them possessing immense property, even whole provinces; though, in consequence of trusting the management of their affairs to stewards, they are generally embarrassed. But a great proportion are in a state of extreme poverty, and even cultivate their fields with their own hands. The burghers were reported at the singularly small number of 11,513; while the country labourers are supposed to be rated too low at 353,419. The Jews constitute everywhere the most flourishing part of the citizens. The Christians are divided between the Romish and Greek persuasions: the former have 1066, the latter 2800 cathedrals. There are about 5000 Armenians, and thirty Protestant congregations scattered through the kingdom. Knowledge is in a most defective state; and the few institutions which exist for its diffusion have been introduced by the Austrians. They have made great exertions to improve the university at Lemberg, which has twenty-six

professors, and a good library. The Gorales, or inhabitants of the mountains, form an entirely different race from the Mazurakes, who occupy the level districts; and an old enmity reigns between these two tribes. The Gorales are a fierce, highland race, constantly armed with the axe, with which they can strike an object at the distance of forty yards; and they brandish this weapon even at their dances and festivals. Till repressed by the vigorous measures of the Austrian government, they were accustomed to make most formidable *raids* upon the low country adjoining. The inhabitants of the eastern part of the kingdom are of Rousniak or Russian origin: they speak a language compounded of the Russian and Polish; they are more industrious than the Poles, and employ themselves in the fabrication of coarse linen. A considerable number of Wallachians, of Magyars, the prevailing people in Hungary, and Germans to the number of 72,000, have found their way into Gallicia.

The cities and towns in this part of Poland are neither very ample nor elegant. Lemberg, however, called by the Poles Leopol, or the city of Leo, founded in the twelfth century, though its interior streets be narrow and old-fashioned, has four handsome suburbs. In 1808 it contained 41,500 inhabitants; of whom 12,700 were Jews. By the small river Pelleir it communicates with the Bug; but its chief trade is by land with Turkey and Russia. The intercourse with this last country, however, is chiefly carried on by the large but ill-built frontier town of Brody, containing from 16,000 to 20,000 inhabitants, of whom more than a third are Jews. The other towns contain only about 5000 or 6000 inhabitants. Among these may be mentioned Przemyzl, once the seat of a principality; destitute of walls, but still defended by a strong castle, and having in its vicinity large manufactures of wood. Jaroslaw, the city of Prince Czartoryski, has a fine cathedral, and may boast of some industry, the Austrians having introduced a fine cloth manufacture. Zlaczow borders on Russia, amid extensive woods and numerous ponds. Sambor and Drohobitz, on the Dniester, have some manufacture and trade, chiefly carried on by Jews. Tarnopol, farther to the north, is tolerably flourishing. Stanislaus, in the south, is a handsome town, which the Austrians propose to convert into an important fortress. Stry is situated in the heart of the mountain district, amid woods, streams, and torrents. Cultivation is extremely rude; yet the Jews have introduced some slight branches of industry. Halicz, from which Gallicia derives its name, is now a small place, chiefly occupied by a particular sect of Jews. Bochnia and Wieliczca, entirely supported by the salt mines, do not contain more than 3000 people.

SUBSECT. 3.—*The Kingdom of Poland.*

The partial revival of the kingdom was an act of Russian policy. The name of Poland, even after the downfall of the great power which it once designated, and the division of the country among the surrounding potentates, was still grateful to the ear of every genuine Pole. This disposition was manifested in a manner not to be mistaken, when Napoleon over-ran Poland, and proclaimed its erection again into a kingdom. Although the Poles could not, under his sway, hope for much civil liberty, they rallied round him; and, had not his ambition overleapt itself, by urging him into the frozen and hostile regions of Muscovy, his dominion over Poland might have become stable and permanent. Napoleon fell; and Alexander, in reward of his own achievements in the common cause, grasped the regions of the Vistula, including the capital, which had formerly belonged to Prussia, and had been erected by Napoleon into the Duchy of Warsaw. These, with the country on the Bug and the Narew, he formed into the kingdom of Poland, containing only a small portion of what that country had been in her glory, but yet comprising its most improved districts, and those most decidedly Polish.

The kingdom of Poland belongs generally to the vast Polish level, except its southern border, along the waiwodats of Cracow and Sandomir; along which is an extensive and steep though not lofty branch of the Carpathians. The highest point is called the Syss Gora. The plain, of which the greater part of the kingdom consists, is rather of a sandy character, and the overflowing of its large rivers often converts it into marsh. It does not possess the exuberant fertility of the Ukraine, and of other southern provinces, celebrated for that very fine wheat with which the port of Dantzic supplies the rest of Europe. Generally speaking, however, it is a good grain country, and under tolerable cultivation. The manufactures of linen and woollen cloth for domestic consumption are considerable, though they produce none of fine quality. In the capital, the making of carriages and harness is of such extent as to assume almost a national importance. Minerals are not a leading feature, though there are iron mines of some value in the southern range of hills. There is a great transit trade of grain down the Vistula, partly the produce of the kingdom itself, but chiefly of the more fertile regions to the south; but Poland labours under a severe disadvantage in not possessing the mouth of that river, and its port of Dantzic, which has been annexed to the Prussian territory.

A representative constitution, as already observed, was granted by Alexander, in his quality of king of Poland. The new diet was divided into two chambers, one of which was elected by the nobles and the provincial assemblies, while the senate consisted of ten waiwodes appointed by the emperor in his character of king of Poland, ten castellans nominated

by the senate, and ten bishops. This constitution, however, granted in a liberal and conciliatory spirit, was not found to work so agreeably as a sovereign elsewhere despotic could have desired. It became the aim of the prince to abridge the privileges which appeared to him to be too liberally used. The diet was less frequently assembled; the liberty of the press, at first granted, has been withdrawn. These encroachments kindled a discontent, which broke out in the late strenuous effort to effect an entire emancipation from Russia, the unfortunate issue of which, it is to be feared, will for the present deprive Poland of many of the advantages she has hitherto enjoyed.

Warsaw, capital alike of old and of new Poland, is finely situated on the Vistula. During the war which terminated in the subjugation of Poland, Warsaw stood the heaviest brunt; and its population in 1782 was reduced to 75,000; but since that time it has rapidly improved, and in 1829 it contained 150,000, of which, however, about 14,000 were garrison. Among these are 30,000 Jews. The whole city consists of one long street, with others branching from it; but these are narrow and dirty, and, as is usual in aristocratic cities, no provision is made for the comfort and accommodation of foot passengers. The new town is built in a better style; the government palace (*fig.* 441.), and the palace of the minister of finance (*fig.* 442.), are both splendid buildings; but the finest part of Warsaw consists of its four suburbs having separate rights and jurisdictions. That of Praga, once a strong citadel, was almost destroyed in the dreadful assault by Suwarrow, in 1795: it is now, however, rebuilding. Warsaw originally consisted almost entirely of wooden houses; but that material is now prohibited; and out of its 4000 houses, 3000 are constructed of stone. During the period of its calamities, Warsaw lost the finest collections made by its former sovereigns. The gallery of paintings formed by king Stanislaus, and the Zalouski library, were transported to Petersburg; and another library, of more than 45,000 volumes, was transferred to Volhynia. [Even the university founded or rather revived by Alexander, in 1821, has been suppressed.]

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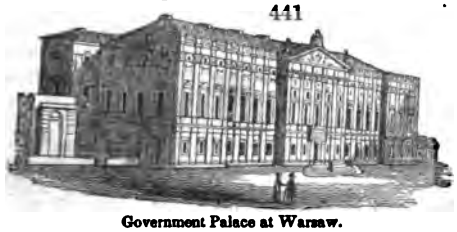

Government Palace at Warsaw.

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Palace of the Minister of Finance.

The other towns in the kingdom of Poland are only of secondary importance. Lublin, which ranks second, contains 10,000 inhabitants. It is situated pleasantly in one of the most fertile districts of the kingdom, and communicating on the south with others still more fertile. It is distinguished by the castle of Casimir the Great, the palace of Sobieski, some fine churches, and the largest synagogue of Poland. Zamosc, in the same vicinity, is an important fortress, while Pulaway, a seat of Count Czartoryski, and Klemerzon, the residence of the Zamoiski, are adorned with some elegant and classic edifices. Kalisc, on the Proswa, is rather a well-built town, with 8000 inhabitants, a military school, and some manufactures. The waiwodat of Sandomir contains a city of the same name, with a fortified castle, but only 2700 inhabitants; and Radow, also a small town, ranks as its capital. Kielce, capital of the mining district, in the waiwodat of Cracow, has a school of mines and about 5000 inhabitants.

Subsect. 4.—*Cracow.*

The republic of Cracow, in default of any place more strictly appropriate, may be here introduced. The three great powers who decided on the destinies of Poland, by a species of caprice, established at a central point between them this free and neutral city, an ancient and venerable capital of Poland. The degree of freedom which it enjoys, though only by sufferrance, has rendered its environs more fertile and smiling than those of the rest of Poland. Its surface contains 500 square miles; and the population of the city amounts to 24,800, that of the territory to 93,000; of which 12,000 were Jews. The university, once the great school of the north, and frequented by crowds of students, was broken up during the civil commotions, and the attempts to restore it have been fruitless. It has at present thirty professors, but not more than 276 students. Cracow is decidedly a Catholic city, and contains eighty-seven monasteries and 164 nunneries. The revenues of the republic amount to 1,379,000 florins. The cathedral is remarkable for the tomb of St. Stanislaus, the monument of Sobieski, and other venerated mausoleums. [A remarkable monument has lately been raised here to the memory of Kosciusko. It consists of a mound, Mogila Kosciusko (Kos-

ciusko's Mount), 300 feet in height, and 275 feet in diameter at the base, and standing upon a rising ground commanding the Vistula.—AM. ED.]

SUBSECT. V.—*Russian Provinces.*

The Lithuanian provinces form an extensive portion of Poland, the character of which is materially different from that of the rest. The two states, after being entirely separate, were united, as already mentioned, in the fourteenth century, by the marriage of Jagellon, grand duke of Lithuania, with Hedwig, the heiress of the Polish monarchy. This union, however, produced on Lithuania nearly the effect of a subjugation; the kings fixing their residence at Warsaw, and the diet being oftener held there than at Grodno. They passed with comparatively little reluctance under the Russian yoke, and made no movement to meet the attempts of Napoleon to re-establish Poland. The soil is very generally either sandy or marshy, and buckwheat is the crop principally raised. The pastures are excellent, and the forests fine and very extensive; honey and potashes are staple productions. The forests are infested with numerous wolves, bears, and other wild animals; and specimens of the urus are still found in them. The inhabitants appear to rank lower in industry and civilization than either the Russians or Poles. Every branch of trade is in the hands of the Jews, who sometimes even buy the corn before it is in the ear. The appearance of the peasantry indicates the most extreme poverty. Many of them are clothed merely in sheep-skin, their shoes made of the bark of trees, their carts of mountain ash, joined together without iron. White and Black Russia are names applied to several of the more eastern provinces of this part of Poland. They were, as the name implies, conquered at an early period from Russia, by the dukes of Lithuania. Those provinces present in a more decided manner all the features which characterise Lithuania. The forests and marshes are more extensive, the industry of the people still more relaxed, and the arts in a ruder state. The roads are almost impassable, the villages mean; and in the houses, men, women, and cattle, are often lodged under the same roof. The palatinates of Polotsk, Witepsk, Mcislaw, Mohilev, and Minsk, were comprehended in White Russia, while Black Russia was a name applied only to that of Novogrodek.

The cities, and even the towns, in this quarter of Poland are neither numerous nor generally important. Wilna, the capital of Lithuania, is situated on the Wilia, a large tributary of the Niemen, and carries on a very considerable trade. The inhabitants are stated at upwards of 40,000, of whom 5000 are Jews. The emperor Alexander bestowed considerable pains on its improvement. He revived and richly endowed the university, which, with its dependent gymnasia, now contains 433 teachers; and is well regulated. It has also an observatory, and a school of navigation, which last does not seem very well placed. The Polish contracts, during their proper season, produce a great stir. Grodno, once a capital of Poland, and the frequent place of assembling for the diet, has lost its silk, velvet, and cloth manufactures. Its palaces are falling to decay; and its population is reduced to 4000 or 5000. Kowno and Troki are towns of 3000 or 4000 inhabitants. Mohilev, on the Dnieper, a town of 16,000 souls, has an extensive trade, maintaining the communication of these provinces with the Black Sea; while Witepsk, on the Dwina, communicates with Riga, and has a population of about 13,000. Mstizlawl and Dubrowna are rude towns, built almost entirely of wood. Minsk, though small, is the capital of an extensive province, in the south of which are Slonim and Rinsk, the latter situated in the district called anciently Polesia, still almost entirely overspread with forests, lakes, and marshes, which in the wet season convert its surface nearly into a sea. It yields, however, fish, honey, timber, and iron. Brzest Litow, in its eastern border, has a strong castle on the Bug, and contains a Jewish academy, the resort of students from every part of Poland, and even of Europe. Bialystock, situated near the western extremity of the Russian empire, is a rather modern town, with a fine castle, and several public buildings.

The Polish Ukraine, comprehending the provinces of Podolia and Volhynia, forms a rich extensive level, producing the finest grain and pasture of all the Polish provinces. This vast tract of the Ukraine, divided by the Dnieper into two nearly equal parts, formed the ancient and flourishing kingdom of Kiev, the eastern side of which was afterwards annexed to Russia; while the western, the most fruitful and valuable, was attached to Poland. All, however, has now been absorbed in the wide-spreading dominion of the former empire. Volhynia is a vast, almost unvaried, low level; but Podolia has, along the banks of the Dnieper and its tributaries, ranges of hills of small elevation, forming romantic vales and cascades, without, however, interrupting the general level character. Though the climate is comparatively mild, the southern products of wine and oil cannot be brought to perfection; but there is a great surplus of grain of the finest quality, and of cattle and sheep. According to the tables of M. Marczinski, there are in Podolia 93,000 nobles, 136,000 Jews, 197,000 Latin, and 838,000 Greek Christians. He reckons also 781,000 peasants bound to the glebe.

The towns, in a district so decidedly agricultural, are not of much importance. In Podolia, Kaminiec, once the mighty barrier of Christendom, has lost its importance, since the

limit of the Russian monarchy has been extended so far beyond it. The provincial authorities still reside there, and it retains its strong castle seated on a rock. The commerce of this province is chiefly carried on in Mohilev and Szarnygrod, which are of about the same dimensions. Bar and Targowitz, the seats of two political confederations, possess a gloomy celebrity in the history of Poland. Berdyczew, the largest town in Volhynia, is ill built, and filled with crowds of Jewish traffickers. The nobility carry on their contracts at Dubno, a smaller town, and Irlomitz, still smaller, yet holding at present the rank of a metropolis. Wlodomir, a celebrated city, which gives name to a kingdom, is now only a colony of Jews; and Ostrog, with a district round it, has been assigned as the last refuge of the knights of Malta.

CHAPTER XVI.

RUSSIA IN EUROPE.

European Russia is the chief portion of an empire of enormous extent, with vast capacities of improvement, and standing at present, if not first, at least in the very first rank, among military nations. It may be considered either as including that great part of Poland which has been absorbed into it; or as comprising only old Russia, as it existed previously to the violent partition of Poland. Although there is little prospect, at present, that the acquisitions in Poland will be wrested from the empire, yet we have reserved for that fallen, divided country, a place and a name, which has afforded the proper occasion for treating of the Russo-Polish provinces. The empire shall now be considered only in a detached and independent view.

Sect. I.—*General Outline and Aspect.*

European Russia is bounded on the north by the Frozen Ocean, and especially by its great gulf, the Bieloe More, or White Sea. On the east, those grand natural limits, the mountains called the Urals, and the rivers Volga and Don, separate it from the Asiatic continent. On the south, it is bounded by the Euxine Sea and its gulfs, and by European Turkey. Westward, it unites with Russian Poland, which brings it in contact with the dominions of Prussia and Austria. It extends from about the 45th to the 68th degree of north latitude, and from the 21st to the 62d degree of east longitude; making about 1600 miles from north to south, and 1400 from east to west. The superficial extent, notwithstanding very extensive admeasurements, under the direction of the government, is by no means precisely ascertained. The great map, of one hundred sheets, drawn up chiefly from provincial surveys, gives to it an area of 1,400,000 English square miles. In 1795, the amount was reduced to 1,293,000, by a map constructed with very great care; but, from some cause or other, this did not include the provinces of Pultowa and Cherson, which, in the great map, had been rated at 59,000 miles. Since that time, many new astronomical observations have been made, and many errors rectified. Wichmann, in his "Monarchy of Russia," published at Leipzig in 1813, raised it to 1,396,000. The latest estimate made by Mr. Bramsen, in his work of "Russia and the Empire of Russia," published in 1819, raises it to 1,424,000. Humboldt takes it at 2,040,000; but he includes, we presume, the Polish territories. The discrepancies, as to the details, are still more remarkable, and prove that more accurate observations remain to be made, before this vast territory can be considered as duly surveyed.

The surface of the Russian territory is the most level of any in Europe. That great tract of low land, which begins in northern Germany, expands in Russia to its greatest breadth, exceeding 1200 miles. A great portion, in the south especially, consists of those immense levels, called *steppes*, over which the eye may range for hundreds of miles without meeting a hill; only some large ancient tumuli occasionally diversify their surface (*fig.* 445.), They terminate only at the long chain of the Urals, which, rising like a wall, separates them from the equally vast plains of Siberia. The Urals are scarcely known, unless where the road to Asia passes over them: there they are neither very lofty nor very steep, but well wooded, and rich in minerals, especially on the Asiatic side. The mountains of Olonetz, on the north, appear to be a prolongation of those of Sweden; while, on the extreme south, the Crimea displays some steep and picturesque, though not very lofty ranges.

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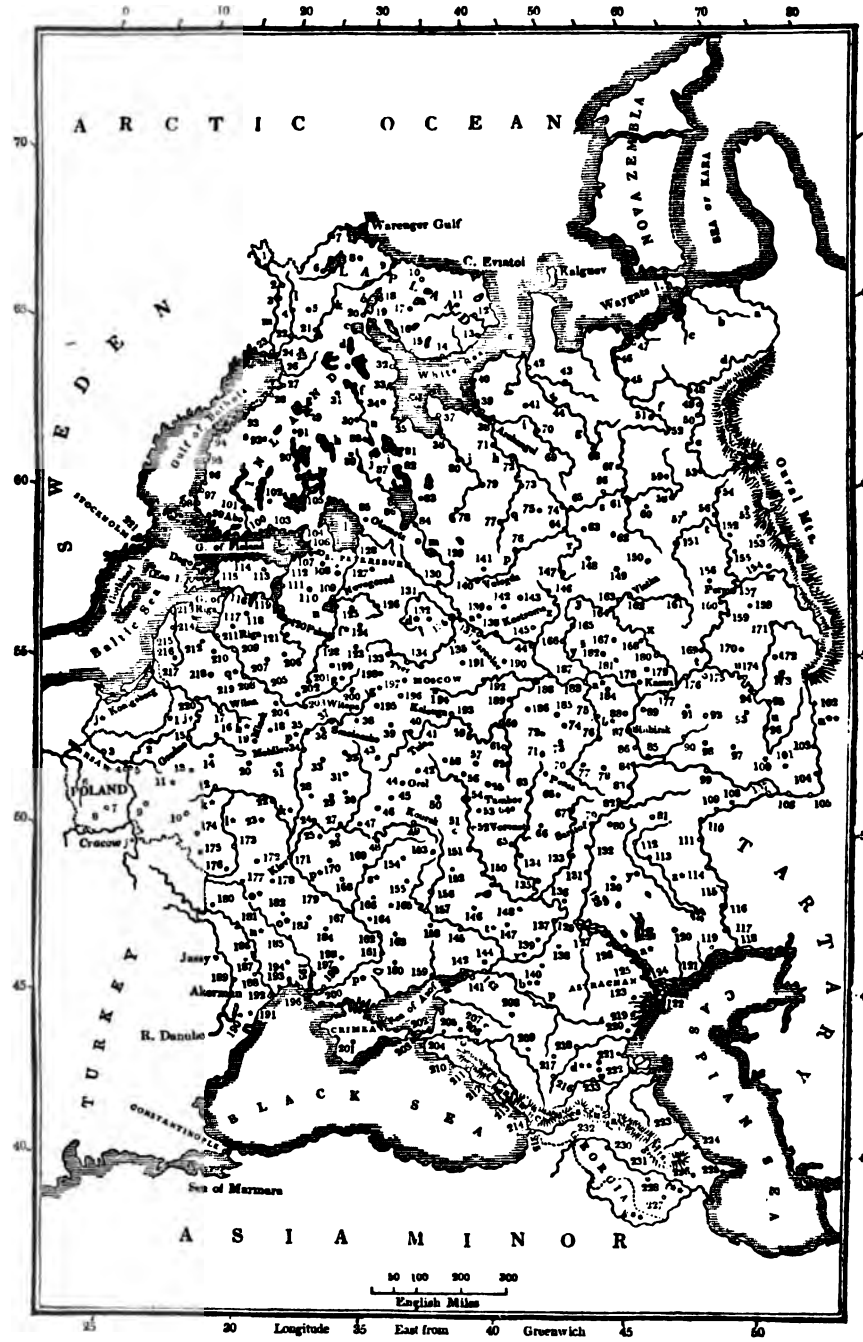
Tumuli on the Steppes.

The rivers of Russia are of the first magnitude; though the distant and insulated seas in which they terminate, incalculably diminish their commercial importance. The Volga is the greatest river of the empire and of Europe. It rises in the frontier of Novogorod, not far from the Baltic, and traverses in a S.E. line all the central provinces. After receiving


ARCTIC OCEAN
NOVA ZEMBLA
SEA OF KARA
Waregue Gulf
C. Evstoi
Kolguev
White
Gulf of Bothnia
SWEDEN
Stockholm
Baltic Sea
Gulf of Finland
St. Petersburg
Moscow
Kazan
Ural Mts.
Riga
Wilna
Kiev
POLAND
Cracow
Oriel
Voronez
Kursk
TARTARY
Jassy
Akerman
R. Danube
CRIMEA
Sea of Azof
BLACK SEA
TURKEY
Constantinople
Sea of Marmora
ASIA MINOR
CIRCASSIA
GEORGIA
ARMENIA
English Miles
Longitude East from Greenwich

from the Asiatic side the Kama, its greatest tributary, it flows chiefly S.S.E., forming the boundary of Europe and Asia, till, after a course of about 2700 miles, it opens by numerous mouths into the Caspian, near Astrachan. Large and broad streams, spreading over the southern plains, slowly make their way to the Black Sea. Of these the chief are the Dnieper, celebrated under the name of Borysthenes; the Don, or Tanaïs, one of the boundaries of Europe; and the smaller eastern stream of the Dniester. The Dwina, or Duna, rising from a source not far distant from that of the Borysthenes, rolls a broad navigable stream towards the Baltic. Another Dwina, in the north, flows towards Archangel; and during that brief portion of the year when it is free from ice, conveys to that remote haven the commodities of a wide extent of country.

References to the Map of Russia in Europe:

NORTH PART.
1. Enontekis
2. Muonioniska
3. Kilangi
4. Ylyasko
5. Kittila
6. Enara
7. Uljoki
8. Piese
9. Kola
10. Veronez
11. Kamennaya
12. Loundu
13. Ponoi
14. Pialitza
15. Barzouga
16. Oumba
17. Lavoser
18. Voroneozer
19. Kandalax
20. Baden
21. Kemitrask
22. Bavaniemi
23. Tornea
24. Kemi
25. Portimo
26. Norr Ijo
27. Uleaborg
28. Brahestadt
29. Kajana
30. Morgouba
31. Tchenavolok
32. Gridina
33. Pongania
34. Kietmi
35. Ostrog
36. Onega
37. Ounskoi
38. Kholmogor
39. Archangel
40. Hozla
41. Pinega
42. Mezene
43. Limonnikovo
44. Tzenogorsk
45. Elma
46. Pilimetz
47. Konzero
48. Ousa
49. Oronetz
50. Naoust Sapleao
51. Niastia
52. Tschalia
53. Pogog
54. Akieva
55. Tchastikh
56. Tcherdin
57. Loupia
58. Kertchemskoe
59. Skorodoumsk
60. Merdinsk
61. Sisolsk
62. Mischanovsk
63. Salsk
64. Veliko Oustjug
65. Solvilchegodsk
66. Tarensk
67. Novolok
68. Boutkansk
69. Poganetz
70. Kokonagora
71. Siiskoi
72. Penda
73. Sohenkorsk
74. Krasnoborsk
75. Semenovsk
76. Totma
77. Viatisk
78. Kargapol
79. Fedotova
80. Tourosovsk
81. Vigozersk
82. Poviatnetz
83. Pouloj
84. Vitegra
85. Olonetz
86. Petrozavodsk
87. Souna
88. Navolok
89. Lobasalma
90. Kuopio
91. Tidensalmi
92. Kivii
93. Great Carleby
94. Wasa
95. Christianstadt
96. Bjorneborg
97. Raumo
98. Nystadt
99. Abo
100. Helsingfors
101. Tavasthus
102. Heinola
103. Fredericksham
104. Wiborg
105. Serdobol
106. St. Petersburg
107. Oranienbaum
108. Sophia
109. Novogorod
110 Louga
111. Gdov
112. Narva
113. Wesenburg
114. Revel
115. Hapsal
116. Pernau
117. Venden
118. Valck
119. Derp
120. Pskov
121. Ostrov
122. Kohlin
123. Ostachkov
124. Walday
125. Krestzi
126. Borovitchi
127. Tikhvin
128. N. Ladoga
129. Kirilov
130. Tcherepovetz
131. Oustioujna
132. Krasniokolin
133. Torjok
134. Tver
135. Koliazan
136. Mologa
137. Jaroslaw
138. Kostroma
139. Lioubim
140. Vologda
141. Kadnakov
142. Boni
143. Galitzk
144. Povovolskoi
145. Kadir
146. Koligriv
147. Nikolsk
148. Verkholamsk
149. Potchinok
150. Agatovak
151. Kai
152. Solikamsk
153. Kiria
154. Tchizminsk
155. Romanova
156. Obva
157. Perm
158. Koungour
159. Osa
160. Okhansk
161. Glazov
162. Viatka
163. Orlov
164. Kotelnitch
165. Verlouga
166. Varnavin
167. Laransk
168. Ourjoum
169. Sarapoul
170. Mageihma
171. Krasnooftmsk
172. Metchi
173. Simsk
174. Birsk
175. Menzelins
176. Flabouga
177. Tchstopole
178. Kazan
179. Arsk
180. Malmisch
181. Tzarevokokachaisk
182. Tzarevosantchoursk
183. Vasil
184. Tzivilsk
185. Arzamas
186. Ardatov
187. Nizni-Novogorod
188. Gorbatov
189. Mourom
190. Schoura
191. Pereslav Zalitsk
192. Vladimir
193. Kolomna
194. Moscow
195. Viazma
196. Borodino
197. Volokiamsk
198. Kiev
199. Toropetz
200. Bieloi
201. Great Louki
202. Gorodok
203. Witepsk
204. Ouschatch
205. Polotsk
206. Opotchka
207. Lutzin
208. Dunaburg
209. Zelburg
210. Bauske
211. Riga
212. Mittau
213. Pilten
214. Goldingen
215. Liebau
216. Telsch
217. Rossiena
218. Poniwiech
219. Wilkomirz
220. Kowno.

SOUTH PART.
1. Suwalki
2. Lomza
3. Plock
4. Warsaw
5. Praga
6. Petrikau
7. Kielce
8. Miechow
9. Lublin
10. Kovel
11. Kobrin
12. Pinsk
13. Proujani
14. Slomin
15. Grodno
16. Lida
17. Wilna
18. Borisov
19. Minsk
20. Slutzk
21. Bobronisk
22. Mozir
23. Ovroutch
24. Tchernigov
25. Nejin
26. Bornza
27. Sosnitza
28. Bielietza
29. N. Miasto
30. Starodoub
31. Mglin
32. Roslovl
33. Therikov
34. Mohilev
35. Orcha
36. Krasnoi
37. Smolensko
38. Dorogobouj
39. Lokhov
40. Kaluga
41. Tula
42. Tchern
43. Jezdra
44. Orel
45. Demitrovsk
46. Sievsk
47. Korolevetz
48. Bielopol
49. Kursk
50. Livni
51. Dievitzk
52. Voronetz
53 Ousman
54. Zadonetz
55. Koziov
56. Dankov
57. Oranienburg
58. Bogoroditzk
59. Rezzan
60. Elatom
61. Schatzk
62. Morschansk
63. Kirsanov
64. Tambov
65. Novokopersk
66. Balaschev
67. Atkarsk
68. Serdobsk
69. Tchembar
70. Penza
71. Norovtchat
72. Krasnoslobolsk
73. Scheschkiev
74. Porchinki
75. Alatir
76. Kotiakov
77. Goroditch
78. Kouznetzk
79. Saratov
80. Konkoschkoukovka
81. Vetlian
82. Volsk
83. Khvalinsk
84. Sizran
85. Stavropol
86. Singilei
87. Simbirsk
88. Bouinsk
89. Spask
90. Sergievsk
91. Apatchka
92. Bourgoulma
93. Tevlekeava
94. Oufa
95. Koultai
96. Sterlitamak
97. Norouvova
98. Borgoroslan
99. Bouzoulouk
100. Samotkina
101. Smakova
102. Uralsk
103. Kizilsk
104. Terekinsk
105. Gouberlinsk
106. Girialsk
107. Orenburg
108. Zajivnoi
109. Genvartzav
110. Ouralsk
111. Tchegansk
112. New Ouzen
113. Loukovsk
114. Merjenev
115. Kalmekova
116. Koch Ourlaisk
117. Tonoleva
118. Gouriev
119. Kopinskoi
120. Bieloi
121. Eruk Aman
122. Astrachan
123. Bachmatchchagi
124. Enotaevsk
125. Kopanovsk
126. Tchernoilar
127. Gorodok
128. Tzaritzin
129. Bolieklei
130. Tourgoun
131. Kimichin
132. Zalika
133. Krasnoilar
134. Ourioupinsk
135. Jotovsk
136. Rovlinsk
137. Goloubinska
138. Masov
139. Aksensk
140. Felisov
141. Azof
142. Taganrog
143. Old Tcherkask
144. Tcherkask
145. Donetz
146. Biatlovsk
147. Golov
148. Zaitzov
149. Bogoutch
150. Kalitva
151. Korotoiak
152. Livensk
153. Karotcha
154. Khotmijsk
155. Charkov
156. Koupiansk
157. Izioun
158. Slaviansk
159. Mariopol
160. Oriatkov
161. Alexandrovsk
162. Catherinoslav
163. Pavlograd
164. Alexapol
165. Konstantinograd
166. Pultowa
167. Krioukov
168. Lubni
169. Gladiatch
170. Prilovki
171. Kiev
172. Zytomar
173. Novrad Volinsk
174. Rovno
175. Zaslav
176. St. Konstantinov
177. Khmiatlimik
178. Skvira
179. Tcherkasi
180. Kaminiek
181. Tzekinovka
182. Ouman
183. Novomirgorod
184. Elizabethgrad
185. Olviopol
186. Dobozar
187. Kichenau
188. Bender
189. Leva
190. Ismail
191. Kilia
192. Akermann
193. Odessa
194. Fedorovka
195. Oczakow
196. Kilbourn
197. Nicolaev
198. Cherterina
199. Cherson
200. Perecop
201. Sympheropol
202. Enikale
203. Tamaa
204. Anacopia
205. Tchernoiles
206. Ekaterinodar
207. Novomaloroisk
208. Razsipnoi
209. Stavropol
210. Vaulan
211. Mamai
212. Ardler
213. Soukoum
214. Anacria
215. Poti
216. Gorgievsk
217. Alexandrov
218. Madsiarei
219. Batkalie
220. Bielom Ozer
221. Koulpitchia
222. Kislar
223. Derbend
224. Chaderzend
225. Baku
226. Chamakia
227. Chucheh
228. Ghendieh
229. Keraklissa
230. Teflis
231. Signakhi
232. Gori
233. Mosdok.

Lakes.
a Enara
b Imandra
c Kowdo
d Piavo
e Top
f Kounto
g Ulea
h Piehs
i Vigo
j Sego
k Onega
l Ladoga
m Bielo
n Ilmen
o Tchousk.

Rivers.
a Kara
b Oio
c Kaipoudra
d Ousa
e Petchora
f Ijma
g Mezene
h Dwina
i Pinega
j Onega
k Kemi
l Onnas
m Tornea
n Tchirka
o Scheksna
p Soukhona
q Vaga
r Joug
s Vitchegda
t Kama
u Biela
v Oufa
w Tchiouzov
x Viatka
y Vetlouga
z Ounja
a* Volga
b* Soura
c* Oka
d* Mologa
e* Volkov
f* Lovat
g* Duna
h* Wilna
i* Niemel
k* Vistula
l* Pripet
m* Slou
n* Pruth
o* Dniester
p* Bug
q* Dnieper
r* Desna
s* Seira
t* Psiol
u* Donetz
v* Oskol
w* Don
x* Khoper
y* Medvieditz
z* Little Ouzen
a** Great Ouzen
b** Oural
c** Manitch
d** Kuban
e** Kouma
f** Terek
g** Kur
h** Agadas.

Lakes are not very characteristic of Russia; yet those of Ladoga and Onega, in the north, are several hundred miles in circumference, and form a sort of continuation of the Gulf of Finland. Finland also is covered with numerous winding lakes, of varied form and dimensions; but all these, surrounded by flat and bleak shores and frozen plains, present little that is striking in point of scenery, and afford few facilities for internal intercourse.

SECT. II.—*Natural Geography.*

SUBJECT. 1.—*Geology.*

Russia, including Poland. In this region, which forms a vast plain, more or less completely bounded by mountainous and hilly country, the predominating formations are tertiary and alluvial; those of an older date, namely, the secondary, transition, and primitive, occupying but comparatively small spaces.

Primitive and transition districts. These are the Uralian mountains, Finland, and Russian Lapland; the northern parts of Carelia, and part of the government of Olonetz; the narrow tract, extending from the Island of Oesel in the Baltic, through Esthonia, Ingria, to beyond Vitegra; the country around Lake Ilmen; around Wologda; part of the Waldai mountains; the mountains of Sandomir: the tract extending from Brody, across the Bug and the Dnieper; part of the Crimea, and part of the Caucasus. In these districts we meet with the usual primitive and transition rocks, exhibiting similar characteristics to those in other countries.

Secondary lands. These frequently appear rising like little islands in the great Russo-Polish plains. The following formations are met with:—1. Old red sandstone. 2. Coal formation, as seen in the coal-mines of Poland and Cracovia. 3. New red sandstone, with gypsum, salt, &c. 4. Shell limestone, which, in Poland, contains the famous lead-mines of Olkutz. 5. Keuper sandstone and marl, with gypsum and salt. In Russia there is a northern salt district, which stretches in a line parallel with what is called the Petersburg limestone, for 2000 versts: it makes its first appearance in the Island of Oesel, and is worked in several parts of the south of Livonia. Gypsum is quarried in many parts of this great tract. Mr. Strangway describes a central salt district, of great extent, in the course of the Volga. There is also a rich and extensive tract of red marl, salt, and gypsum, which extends down the course of the Kama, and is probably connected, on the south, with the salt district of the Volga, and on the north with that of Wologda. The principal salt-works are in the neighbourhood of Solikamsk; and the gypsum grottoes of Koungour, in the government of Perm, are of great size and magnificence. 6. Lias and other limestones. 7. Green sand formation. 8. Chalk formation.

Tertiary. The rocks of this class, which occupy vast tracts of the low country, are clay, loam, limestone, brown coal, with gypsum, and in many tracts, as in Gallicia, rich deposits of rock salt. In central Poland, a clay, with lignite or brown coal, rests upon chalk, and is the oldest member, according to some geologists, of the tertiary class. Resting upon this deposit, formed in part by rivers from continents, there succeeds a deposit almost entirely of marine origin, and, consequently, abounding in marine shells. It is the tertiary oolite limestone, very extensively distributed throughout Poland, Podolia, and southern Russia. This tertiary limestone has not been found either in England or Italy; and is peculiar to Poland, southern Russia, and Podolia. It occurs, however, in the basin of Vienna and Hungary, and in France. It is the last depôt of that sea which covered all the country to the north of the Carpathians, from the Baltic Sea to the foot of that chain, and to the Black Sea, in the middle of which rose the mountains of Sandomir, and the plateau, south-west, in the form of islands. It is covered by a marly clay, and a sand, formed by the last great alluvial catastrophe, which gave to Europe its present form, and buried in its depôts remains of unknown species of elephant, mastodon, rhinoceros, &c.

Alluvial. In the alluvial soil we have not in general the same marked limits between the old and new deposits as in the secondary class. The ancient alluvial deposits consist of a great deposit of marly clay or loam, and of numerous blocks of primitive rocks. This loam must be carefully distinguished from that which is deposited from the present rivers. It is a clay mixed with much carbonate of lime, generally of a yellow colour, and very easily frangible when dry: it is distinguished from potters' clay by the lime it contains, and from the marly secondary slates by its want of bituminous matter. In Poland it varies in thickness from 30 to 100 feet, and covers vast tracts of country. It forms the high banks of the Vistula; associated with marly chalk, the excellent soil which affords the wheat of Cracovia and of Sandomir: but, as we advance towards the north, it becomes more and more mixed with sands, gravels, and primitive blocks, and less and less fertile. It is this deposit which contains that vast abundance of extinct terrestrial animals in Poland. The bones and teeth of elephants are the most frequent: remains of the rhinoceros, aurochs, horse, deer, and some great cetacea, or whales, are also found, but less frequently.

An alluvial sand, different from the sand of rivers, is widely spread in Poland. It is in great part formed from disintegrated sandstone rocks; but in many countries it is certain

that the sand has not been brought from a distance, and has been formed on the spot. In this latter case, it cannot be distinguished from the loose arenaceous beds of the tertiary class. In the southern part of the district of Lublin, near to Chelm, in the country situated between Chmielnik, Staszow, and Klimonton, the sand occurs only near to tertiary depôts, and we may almost be sure that it forms a part of them, and that it is not alluvial. The sandy soil of Poland commences on the western part, along the frontiers of Silesia; in the grand duchy of Posen it is connected with the great sandy plain of Northern Germany: it covers a great part of the districts of Kalisc, Masovia, Plock, Augustowa, and Podlachia, the portion north of Lublin, and extends from thence into Lithuania and White Russia. In this plain of sand, and particularly upon and in the loam, we find numerous large and small blocks of primary rocks. At first sight, we might conjecture that these blocks had come from the Carpathians; but a more careful examination proves the falsity of such an opinion. The only river which rises in the primitive soil of Tatra, and which intersects the great sandstone chain of the Carpathians, is the Dunajec; all the rivers rise from sandstone: hence the Dunajec could alone carry the primitive blocks into the plain of Poland. In truth, we find on the Vistula, at the débouché of the Dunajec, and a little lower down, boulders of granite and granitic gneiss, which are identical with those of Tatra; but these blocks occupy so small an extent, that they appear insignificant, when compared with those of the northern plain. There are, on the contrary, convincing proofs, that these primitive blocks have not come from the south, but from the north. First, their magnitude and abundance diminish from the Baltic towards the south, which is the contrary of what would be the case had they come from the Carpathians. Further, their southern limit passes, in the vicinity of Czenstochau, by Przedborz, along the northern foot of the mountains of Sandomir; and, on descending the Kamiona, by the Vistula, on Lublin, Lubartoro, across southern Lithuania, and still further into the middle of Russia. Lastly, the rocks do not correspond with those of the Carpathian and Sudetic chains; while they are identical with those of Sweden, Finland, and southern Russia. The observations of geologists on the same subject in Prussia, Livonia, and Courland, and in the north of Russia, concur to prove that they have been spread over the countries to the north of the Carpathians by a débâcle flowing from north-east to south-west. Our limits do not allow us to enter into detailed descriptions, but we may here cite the predominating rocks.

From Petersburg to the Dwina and the Niemen, we everywhere meet with blocks of a granite resembling that of Wiborg, in Finland; another granite, with Labrador felspar, of Ingria; a red quartzy sandstone, on the borders of Lake Onega, and the transition limestone of Esthonia and Ingria. In eastern Prussia, and in the part of Poland situated between the Vistula and the Niemen, the blocks are of a deep-red granite, with little quartz, calcareous mica, and very little hornblende; a porphyritic granite of the same tint, with large crystals of felspar (granite globulaire); a gray granite, with much hornblende or syenite; a small granular red granite, principally composed of felspar and garnets; a coarse granular granite, with much green, gray, and red felspar, often Labradoric, with black mica, and with numerous large, trapezoidal red garnets (Warsaw); of syenite, diorite, and hornblende rock; of gray and red quartz rock; more rarely of common and hornblendic gneiss, of common porphyry, and antique green porphyry.

Among these rocks, the first three occur in Finland, from Abo to Helsingfors: the coarse granite and the syenite come also from the north, the hornblende rocks appear to be derived from the south of Sweden, or the middle of Finland; the quartz rocks are exactly the Fiall sandstein, between Sweden and Norway; and the porphyries are those of Elfdal, in Sweden.

From Warsaw, on the east, towards Kalisc and Posen, the red granite of Finland diminishes; but the hornblende rocks and the gneiss become more abundant, and the same is the case with the porphyry. We find there, in general, few rocks of Finland, and many of Sweden. This correspondence with the Scandinavian rocks cannot be mistaken. The garnet, epidote, hornblende, Labrador felspar, the predominating hornblende rocks, show, to every one acquainted with the Carpathians, that these blocks do not come from that quarter: further, the red and porphyritic granite, which is the most abundant, is entirely wanting in that chain. In connecting with this fact the known opinion that all the primitive blocks of the sandy plain of Northern Germany, of the Low Countries, and even of the east coast of England, have been transported from Norway and Sweden; this dispersion of the Scandinavian blocks, on this side of the Baltic and German seas, becomes one of the most extensive and singular of geological phenomena; its extent is immense, when contrasted with that of the dispersed blocks observed in Switzerland. In the Jura chain, and the tertiary plain, the last-mentioned fact has been explained by sudden débâcles of Alpine lakes.

The débâcle which transported those northern rocks into Germany, Poland, and Russia, has also formed the marly clay, or alluvial loam: it has interred the elephants and rhinoceroses of an ancient time; it has broken up the chalk plains of the north; it has separated Denmark from Sweden; and given, in general, to the Baltic, and the gulfs of Bothnia and Finland, their present forms. On the other hand, the idea of Hausmann, that these blocks belong to the tertiary period, does not seem plausible.

In regard to the river alluvia, it may be remarked, that they are of but inconsiderable extent in Poland. The Vistula, as the largest river, has formed the greatest quantity. The rivers of the Carpathians, which are rapid in their course, as the Raba, Skaba, Sola, Wisloka, Dunajec, and San, running almost entirely among sandstone strata, which yield readily to their action, carry much débris into the Vistula.

Peat is formed abundantly in the marshy valleys and the great marshes of this plain, but is, in general, of indifferent quality. Bog iron ore occurs in the great marshes of Lithuania, and in the district of Augustowa, and of Plock, in the plain of Gallicia; and is abundantly distributed in Great Poland and Russia. Calcareous tuffa, notwithstanding the abundance of calcareous formations, is rare, in general, in Poland.

Volcanic rocks. The only rocks of this class mentioned by travellers are *trachyte*, which abounds in the Caucasian chain.

Mines. In European Russia and Poland there are but few mines of importance; the principal mineral depositories occurring in the Uralians, Altaïs, &c. The following may be particularized:—

(1.) *Western Uralian mines.* These are situated amidst the primitive and transition rocks, and are principally iron and copper; the more precious metals occurring chiefly on the eastern acclivity of that great range.

(2.) *Central mining district of Russia.* This tract includes parts of the governments of Nizne-Novegorod, Vladimir, Tambof, Reza, and Kaluga; extending from a little above Murom, on the Oca, to near the town of Kaluga. It is, in general, a very poor sandy district, and probably belongs to the red marl formation. Along it are situated several extensive ironworks; for, in general, the iron is manufactured where the ore is raised. These supply the principal consumption of that metal in the interior of Russia. One of the most considerable is the establishment at Vixa, and its dependencies, in the forest of Murom, belonging to M. Bataskoff. The crown works at Tula exclusively Siberian iron: this is the principal manufacture of arms in Russia. The manufactory at Kaluga formerly attempted the finer kinds of cutlery, but failed. The ore of the central mining district is described as occurring, at 60 feet below the surface, in regular beds. Some of the beds are dark red and argillaceous; others are mere layers of large concretions: there are also regular strata of pale yellowish brown-coloured ironstone, which is the ore principally worked. Of the two latter varieties, the lightest coloured ores produce the most iron.

Copper sand. On both sides of the salt country of the Urals is a vast tract of what is commonly called *copper sand*, which extends through a great part of the governments of Viatka, Perm, and Oufa, and completely skirts the south and west sides of the Ural mountains. The sand is of a dull red or green, and is commonly worked for copper. It contains fossil wood impregnated with copper.

(3.) *Finland mines.* At Petrozavodsk, near Lake Onega, there are ironworks, said to be the most considerable in the north of Russia. The only kind of iron now smelted there is the bog iron ore, which abounds in the neighbourhood. The usual way to procure it is to drag the small lakes, especially those north-west of Petrozavodsk, which yield vast quantities of the ore. It is not found spread equally over the lakes: often different parts under the same sheet of water will afford ore of various degrees of purity. We may add, that there is another great ironwork, of the same description, four versts from Petersburg, on the road to Riga.

(4.) *Salt mines.* The Russian salt mines have been already noticed. In Poland, those of Wielicza and Bochnia are the most considerable, affording annually a vast quantity of rock salt.

(5.) *Coal mines.* In European Russia there are no considerable mines of coal. Good coal has been found at Tula, where it is worked; but the quantity is so small, and the difficulty of working it beneath a loose and half-liquid bed of quicksand is so great, that it seems unlikely to be of much utility. Coal has also been worked at Bakhmout, in the government of Catherineslaf; but to no great extent. In southern Poland there are numerous beds of black bituminous coal, resembling that of Britain, some of which are ten yards in thickness; and deposits of brown coal occur in the tertiary districts, which also afford *amber*. The amber is shown in that country to be an exudation from a dicotyledonous tree. From the characters of the tree, and the insects in the amber, a former warmer climate is indicated.

SUBSECT. 2.—*Botany.*

Russia in Europe. Vast as is this country, extending from 45° latitude almost to the extreme arctic region, it exhibits, over the greater portion of its surface, a vegetation very similar to what has already been described in treating of other European countries. The western portion is eminently analogous to Germany and the north of France; its northern parts resemble what we have described under the heads of Sweden, Denmark, and Lapland. On the east, the great chain of the Ural mountains forms a strong line of demarcation, separating the northern European from the northern Asiatic botany; and over this vast surface, winter reigns with excessive rigour; while the short summer, characterised by an

almost tropical heat, induces a most rapid growth in the vegetable productions, and as rapid a decay in autumn. It is in the southern and south-eastern provinces of the empire that we are to look for the chief peculiarities; where the widely extended and celebrated *steppes* are separated from Asia Minor by those great inland seas, the Caspian and the Black Sea, or by the inaccessible heights of the Caucasian Alps. This country has been well investigated by the celebrated Pallas; but, before mentioning some of the more important productions of Russia, in general, as of the districts nearer the capital, we shall give a short sketch of those of the Crimea, a peninsula of the Black Sea, which, from its geographical situation, climate, and soil, is the only region in the empire where all the productions of Italy and Greece might be introduced and multiplied, and where, indeed, many of them are indigenous; nor is any thing wanting to effect so desirable a state of things, save an industrious and well-governed population. No country, again, can be better suited, to the Vine, Silkworm, Sesame, Olive, Cotton, Madder, Bastard Saffron, and other dyeing plants, which have hitherto been imported from the Baltic, the Caspian, and the opposite shores of the Black Sea, at a heavy expense. Even the indigenous produce of the country is most wantonly destroyed. The finest trees with which nature has clothed the mountains fall before the axe, in order to make miserable carriages, though only a small part be employed in their construction. For the naves, the strongest elms and ash trees are cut down, of which the solid root only is used; the most beautiful young oaks and beeches are felled for spokes, axles, and even for fuel; and the full-grown trees for felloes; yet when the wheels, constructed at such an enormous waste of timber, are brought to market, they frequently drop to pieces within a month after they have been purchased. Every winter, the Tartars burn, for their convenience, the fences of their fields and gardens; to replace which, the young shoots and coppices are unmercifully cut in spring; while the windfalls, and the wood needlessly felled, lie rotting in the forests. This waste of young timber, the sale of which affords the chief maintenance of the people, together with the numerous herds of goats, destroy all the young forests; so that large tracts of land, formerly clothed with lofty trees, are now overgrown with worthless bushes and underwood. The beauty of the spring season, which continues from March till the end of May, is well described by Pallas. At that time, not only are the senses gratified with the sweetest perfumes, wafted from the gardens and woods along the banks of the rivers, the last of which exhibit an infinite variety of wild fruit trees, white and red Roses, Lantana, wild Vines, Vitalba, and Jasmines intermingled; but likewise each hill and declivity, around the champaign country, is alternately diversified with the lovely colours of the flowers that everywhere clothe the earth; and sometimes one, sometimes another, species prevailing on different hills, according to their situation, aspect, or soil, vary and enrich the scene. Thus, at a distance, whole sides of mountains, and extensive tracts, covered with red and blue, purple or yellow tints, relieved by a background of shaded greensward, delight the eye with the most fascinating prospects. The fragrance arising from this profusion of flowers, especially March-violets, and the blossoms of trees, together with the grateful odours of the aromatic herbs, embalm the surrounding atmosphere.

The Tartars, originally a wandering people, were induced to become husbandmen, in consequence of the narrow limits of their country; the increase of population; and, probably, from the example of the Greeks, Armenians, and Genoese, to whom they are indebted for their limited knowledge of rural economy, for their orchards, olives, figs, pomegranates, and their vineyards. Of Wheats they have three kinds; summer and winter Rye, winter and summer Barley; Oats, but which scarcely come to perfection; Maize, Millet, of two or three different sorts; and Chick Peas. The Flax (*fig.* 447.) is much esteemed on account of its fineness, and the length of the fibre. Their Tobacco is the Nicotiana paniculata, of which the young leaves are gradually removed, dried in the shade, and buried beneath hay ricks: there they turn to a brownish-yellow colour, similar to that of Turkish leaf tobacco, to which they are nearly equal in value. Sesame used to be cultivated, and rice; but the Russian government has prohibited the latter, because of its unwholesome tendency. In the gardens, Melons and Water Melons, Cucumbers (of which they grow a remarkably large Turkish variety, sown in April, and gathered in May, and which, when filled with meat and rice, is greatly esteemed), Gourds of various sorts, the Egg-fruit (also eaten stuffed with meat), the Hibiscus esculentus, similarly treated with the last, Jerusalem Artichokes, Potatoes, White Cabbages, called Kapusta, celebrated on account of their enormous size, apparently quite different from those of any other part of the world: they appear to derive their excellence from being watered and nourished by the Dshuruksu, which is impregnated with all the filth of the neighbouring town. Onions, from the culture of which many Tartars derive their whole support; Garlick, Leeks, Broccoli, Celery, Parsley, Carrots, and Red Beet.

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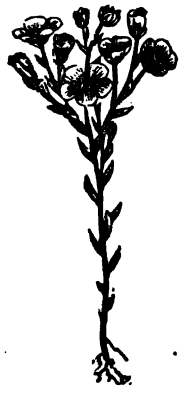

Flax.

The Grape is not only an indigenous production of Crim Tartary, abounding in the mountainous parts, sometimes bearing oblong white berries, and sometimes small round black fruit; but it has been planted in different valleys and districts from the remotest periods of antiquity. Strabo mentions the culture of the vine near the Bosphorus, and the care taken to cover it with earth during the winter, or to bury its roots in the soil, in order to shelter them from the cold, as indeed is still practised in the vicinity of the Alma and Katsha. Numerous kinds are grown, but comparatively with little success, owing to the prejudice and ignorance of the people; and they are exposed to injuries from various causes and circumstances. Caterpillars destroy the leaf and flower-buds, while locusts (the *Gryllus italicus*) devour what the caterpillar has spared. Annually does the locust appear on the dry eminences, in the arid southern regions, from the European boundary, as far as the Irtish and the mountains of Altaï; but it is only in particular years that it multiplies in such numbers as to become pernicious. Thus, after the severe winters of 1799 and 1800, these locusts were so numerous in the Crimea, that they traversed the air in prodigious swarms, and, wherever they settled, they not only destroyed the herbage and culinary plants, but stripped the leaves from their favourite trees, committing great ravages, especially among the vines. The clusters of large but unripe grapes remained till the end of September on the denuded vines, without increasing in size, filling with juice, or ripening; so that they were hard and green, like peas, and thus afforded ocular demonstration of the detriment that must arise from the practice of pulling leaves from the vines, which is recommended by many cultivators. It was not till October, when the vines had again acquired leaves from the collateral buds, that they ripened, though imperfectly, and afforded bad acidulous must. In a winged state, these locusts at length devoured the foliage of the trees; and the Fraxinus Ornus, or Manna Ash, in particular, was everywhere seen stripped to its very summit; nor were Orange and Nut trees exempted from their depredations. In the following year, these vermin appeared still earlier, and in increased swarms, spreading over the country in vast bodies, and advancing at the rate of one hundred fathoms and more in a day. Although they prefer advancing by the roads, or over open tracts, yet they will penetrate through hedges and across ditches: their way can only be impeded by brooks or canals, as they are apparently afraid of every kind of moisture. Often they attempt to cross by means of overhanging boughs, and pass in close columns on the stalks of plants and shrubs, where they seem to rest, and enjoy the refreshing coolness. Towards sunset the whole swarm collect, and creep up the plants, or encamp on slight eminences. Woe, then, to the vineyards where they settle for the night; and if the following day be cold, cloudy, and rainy (in which weather they never travel), they not only consume all the weeds and vine-leaves in it, but, frequently, when these fail, they completely strip the bark and buds off the young twigs, so that these shoots remain throughout the entire summer as white as chalk, and full of sap, without producing fresh foliage. The same fate awaits those places on which they settle for the purpose of casting their skins. It is remarkable, that while the vine-blossoms continue closed the locust does not attack them; but as soon as they are blown it devours the whole, in the most rapacious manner, the stalk only being spared. Their favourite food is generally the plants found in vineyards, as Carduus tataricus, Salvia nemorosa, Millefolium, Melilotus, Cerinthe; the fetid and poisonous Conium maculatum, which does not, however, prove fatal to them; the Asparagus volubilis, Ebulus, Coronilla varia and valentina, various kinds of Geranium, Linum, and Inula; Centauria solstitialis, and all bitter vegetables. On the other hand, the locusts do not prey on grasses; some species of grain, as Millet, are also spared by them, and Sedge, which is the favourite food of the great erratic locust, together with the Aristolochia Clematitis, which grows luxuriantly in vineyards; Clematis Vitalba, the Euphorbiæ, Rumex Patientia, Mentha sylvestris, Artemisia maritima, Contra, pontica, and austriaca; the rough Echia, all the Atriplices and Salsolæ, the Stellera passerina, the milky Sonchus, Chondrilla and Prenanthes, Rhus coriaria and Cotinus. After having consumed every other vegetable, they attack the Caper buds, the Beta Cycla, and Euphorbia; to the latter of which it must probably be ascribed that many of the locusts, firmly adhering to these plants, ultimately perished.

In the orchards, the Crim Tartars have a great variety of fruit. Pears of several kinds, of which the Duli is particularly esteemed, and is remarkable for being thicker in the middle than at the top. Of Apples, numerous wagon-loads are, in the autumn, sent to Moscow, and even to Petersburg, especially of the sort called Sinap Alma, or Apple of Sinap, and, as may be supposed after such a *trajet*, they are sold at a very high price. These fruits will even keep till the July of the following year. There are summer and winter Quinces; with a third sort, that is cultivated along the Caucasus, and, possessing no astringency, may be eaten raw. Plums and cherries are of several kinds; but the larger description of stone-fruit, such as Peaches and Apricots, are scarce and indifferent. The Service tree, the Cornel Cherry tree, and the Lotos (*Diospyros Lotos*), are found both wild and cultivated: the first seems to be generally prized for its wood; and of the second, the fruit is gathered in large quantities, and suffered to ferment, for the purpose of converting it into brandy. To

this list may be added the Pomegranate, Mulberry, Walnut, Hazelnut, the Corylus Colurna, and Figs.

With regard to the trees and shrubs, the mountains of recent formation produce them of small stature, except along the banks of rivers and brooks; but the southern mountain district, where the old formation prevails, abounds in forests, and the valleys between the loftiest mountains are interspersed with enormous Oak, as well as red and white Beech trees, which are equally useful in naval and domestic architecture.

Among the evergreen trees in the Crimea, the most conspicuous are the Sea Pine (*Pinus maritima*), called by the Tartars *tzaam*, and two species of Juniper. The former grows chiefly on the high mountains by the sea-coast. The largest beams afforded by it are about two or three fathoms long. Its wood is durable and resinous, but very knotty; the resin may be collected in large quantities from it. There are two kinds of Juniper, one bearing red, and another black berries. The former seems to be Juniperus Oxycedrus, and is a small inferior tree or brushwood; the other forms trunks more than a foot in diameter, with wood smelling like Bermuda Cedar. To these trees may be added the Yew: it attains a considerable height and thickness in the valleys of the Alps, or Yaila, where it is by no means rare.

The following umbrageous trees occur in Crim Tartary:—Two Oaks, the common and the Cerris; the latter seldom growing high, as it is eaten down by goats; three kinds of Beech, which inhabit various situations, and attain different degrees of stature; the Dwarf Elm, which is very common, and whose far-spreading roots are highly injurious to vineyards and orchards; it is different from the tree of Siberia, and its trunks seldom exceed a foot in diameter: four kinds of Poplar, the white and black, the Aspen and the Lombardy Poplars; the latter was introduced from Italy, and has received from the Turks the appropriate name of Salvi, which is also applied to the cypress, that it greatly resembles. These trees thrive extremely, and, being cleared of the low shoots, form beautiful pyramidal heads, and attain an astonishing height. Notwithstanding their solitary and often exposed situations, they have never been known to be shivered by lightning, broken by stones, or torn from the soil; their long and vigorous roots running to great distances, and attaching them firmly to the ground. Their wood is extremely hard, but easily injured by moisture. The Linden tree, and the Maple, or Plane; also the common Maple (*Acer campestre*), called by the Tartars the Spoon tree, because its wood makes excellent spoons. Two kinds of Ash; the common species, inhabiting the cold, and the Manna Ash, the warmer, southern spots. Several Hawthorns, particularly the black-fruited one, and the varieties with brown and with large reddish berries; also the Oxyacantha, with small red fruit; and Cratægus Aria, torminalis, and orientalis.

Among the wild fruit trees are the early and late Apples and Pears; three kinds of Cherry, a small sour-fruited species, a light red and sweet Cherry, and lastly, the Mahaleb Cherry, whose wood is veined, and diffuses, when the trunk is felled, an agreeable odour, resembling that of bitter almonds, which the wood also retains for a long period. The fruit, which is bitter, and called by the Tartars Dog cherry, is the principal ingredient employed for preparing ratafia and cherry brandy. Wild Plum trees are not very common; but the Sloe grows in the greatest luxuriance. The Turpentine tree occurs sometimes in the southern parts, near deserted valleys: it is, perhaps, an exotic; the trunk attains a thickness equal to a man's body, and the wood resembles Guaiacum, both in weight and colour. The Strawberry tree (*Arbutus*) thrives only on steep rocks, exposed to a meridian sun; it is more prized for its beauty and fine wood than for the fruit, which is deficient in juice.

In the mountains and forests are the following low shrubs:—the round-leaved Alder; two species of Spindle-tree; the Water Elder; the Wayfaring tree, or Lantana, from the wood of which the Tartars manufacture the tubes of those tobacco-pipes which are in such great request in Russia and Germany, and known there by the name of Gordina, or Gordovina; two sorts of wild Rose; the Privet; the wild Cornel, and the wild Vine; the trunk of the latter being as thick as a man's arm, and its branches ten or fifteen fathoms long. The Virgin's Bower (*Clematis Vitalba*) twines around trees, and finally stifles them; its blossoms diffuse an agreeable smell; and Ivy, which, however, seldom produces a considerable stem.

The shrubs growing in open situations are the Christ's Thorn (*Paliurus*); two species of Tamarisk (*T. germanica* and *tetrandra*), flourishing in the beds of rivers; a weak kind of Willow, not the Salix babylonica, which, however, though not indigenous, thrives uncommonly well: the Berberry and Brambles; the Elder and Ebulus; the Sumach, or Tanner's tree, of which the acid red berries are an important ingredient for the preparation of animal food, and the whole plant excellent for tanning; the Cotinus, or Jews' Leaf, so called because the Jews particularly employ it in tanning morocco; the Medlar Thorn, or Pyracantha, named also Devil's Thorn; the Mespilus Amelanchier; the Judas tree (both the latter are scarce); the gray Spiræa, yellow Jasmine, Spanish Lilac, and Italian Honeysuckle, Coronilla Emerus, Colutea arborea, Saltpetre Wort (*Nitraria*), Caperbush, Salsola ericoides, and, finally, the Astragalus Poterium, or Bastard Buckthorn, of the Crimea.

Of the plants useful to the Crim Tartars for economical purposes, Pallas observes that no

nation is better qualified to instruct us in the nature and properties of esculent vegetables than the Greeks, who are compelled, by the strict fasts of their church, especially in the spring, to search for every edible root and herb. Thus, they eat the thick roots of some abundant species of Scorzonera; of the very common Ornithogalum pilosum; of Lathyrus pilosus, Chærophyllum tuberosum, and hordeum bulbosum, which last is called by the Tartars Earth Nuts; further, the sprouts of the wild mountain Asparagus, of Sisymbrium Loeselii, and Crambe maritima, which last greatly resemble broccoli; and the stalks of a species of Heracleum; the young leaves of Rumex Patientia, and of the Goosefoot, or wild Orache; of the Vine, the Berberry, and even the acrid Arum maculatum, also the Corn Salad, or Valeriana Locusta, that sprouts early in the spring; Brooklime, thriving in running waters throughout the winter; wild Purslane; Dandelion, while it is germinating; wild Celery; common Garlic, or Allium descendens, and several others. Of the Caperbush, they eat not only the young shoots, greatly resembling asparagus, but likewise the buds, fruit, and every other esculent part of that shrub. They have not been observed to use the Sea Cabbage, though they are well acquainted with the Crithmum, the genuine Rock Samphire of England.

There is an abundance of vegetables in the Crimea, affording excellent food for cattle, and consisting not only of a great variety of grasses, but also of the best vegetables, recommended for artificial meadows: for instance, the white and yellow Melilot; the white Mountain and Bastard Trefoil; Hop Clover; the large red Trefoil; several kinds of Medick, such as the Swedish and common Lucerne; the Esparsette of the French; various fine species of Vetches; the Lotus and Coronilla; the common Goat's Rue, or Galega; the common Burnet Saxifrage, or Pimpinella Saxifraga; the Poterium Sanguisorba, &c. The mountains, as well as the champaign country, present good pasture for sheep; and, in ordinary winters, the flocks are suffered to remain in the fields. Camels find rich food in the Centaurea ovina, Kali, and other prickly plants; nor is there any scarcity of seeds for feeding poultry.

Of plants useful for dyeing, Crim Tartary produces, in a wild state, Madder, some fine species of mountain Goose-grass, Woad, Dyer's Green weed in great abundance; and, on the southern coast, even the Litmus, or Croton tinctorium; the Safflower succeeds uncommonly well in gardens. The genuine oriental Saffron may also be cultivated with advantage: of the four indigenous species of Crocus, two produce their beautiful blossoms in the spring, and two in the autumn; but none yield the real Saffron. The seeds of the great Pæonies are surrounded with a red pulp, the juice of which affords a fine and durable purple dye.

For tanning, the Tartars possess valuable plants in the Sumach and Cotinus. They might also make use of the Tamarisks; the dwarf gray Oak; the small Hornbeam tree, which covers whole mountains; the roots of the Statice coriaria; wild Sage; and the common Periwinkle (*Vinca*). In fact, no branch of manufacture promises to be more lucrative to the inhabitants of the Crimea (which supports very numerous herds of cattle), than tanning, and the Turkish harbours present a certain and profitable mart for all sorts of prepared leather.

Among the plants delighting in a saline soil, there is an abundance of the different species of Saltwort: not only on the Crimean coast, and around the lakes, but also in every situation where the earth is in the slightest degree impregnated with salt or nitre, the Atriplex lacinata grows in profusion: from the latter plant, several Greeks have acquired the art of burning excellent Soda, or Kali, which is exported to Constantinople, and even to the more distant maritime towns of the Mediterranean.

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Hemp.

Numerous medicinal plants, which are at present obtained from the Levant and Greece, might be cultivated in Crim Tartary; where many, indeed, are indigenous. Among other natural productions, genuine Turpentine might here be collected. The Convolvulus Scammonia, Pæonies, the roots of which are very aromatic: the Belladonna, together with those salutary herbs in fevers, Chamædrys, Chamæpithys, and Scordium; Rue and Sage, Balm, Pontian Wormwood, Dictamnus albus, Ruscus, and other officinal plants, grow in abundance on the mountains, and are very efficacious. Beside other marine vegetables, flourishing on the rocky and stony banks in the sea, there occurs the peculiar Worm herb employed by the Greek apothecaries, and which they also distinguish by the corresponding name of Helminthochorto.

If such are the valuable vegetable products with which nature has blessed the south of Russia, we shall find that many of those of the north are scarcely less important to mankind: there, Maize and the finest Wheats give place to Rye, Barley, and Oats; the culture of the Mulberry and Vine to that of Hemp

(*fig.* 448.) and Flax, such vast quantities of which are annually exported, as to form a staple article of trade, and which thrive, as does the potato, so high north as Archangel. The stately Oak is replaced by the graceful Birch, and the Pinus maritima by the P. sylvestris, or Scotch Fir. Indeed, the most common species of wood in the immense tracts of forests* extending over the northern parts of the Russian empire consist, for the most part, of the Pine tribe. In some places, the pine trees grow to a great height and size. The Scotch Fir (*Pinus sylvestris*) is by far the most abundant, and, retaining its foliage during winter, gives shelter to man and to the wild animals of the forest, and greatly enlivens the dreariness of these bleak regions. The greater the intensity of the cold, the firmer and more dense does its timber become. This tree furnishes the peasantry with materials for constructing their cottages, boats, fences for enclosure, and with fuel. It is from the ashes of this tree that the potashes of Russia are principally obtained; and from the roots an abundant supply of turpentine is collected by the peasantry, by a very rude method of distillation.

Next to the Fir ranks the Birch (*figs.* 449. and 450.) of which vast forests exist in various parts, particularly in Finland, and about Moscow and St. Petersburg. Besides supplying a large portion of the firewood, and many household utensils, the natives extract a kind of wine, by fermenting its juice, which is sold at Moscow at two rubles a bottle. The bark serves to make cordage, fishing-nets, and sails for the boats used on the lakes, as well as for dyeing the nets, and tanning. The peculiar odour and colour of *Russia leather*, which is so much esteemed by bookbinders, and is said never to be attacked by insects, are due to a kind of oil, extracted from the birch, which is called *diojet*, birch-oil, or birch-pickle. An extensive use is made of the leafy twigs in the vapour-baths.

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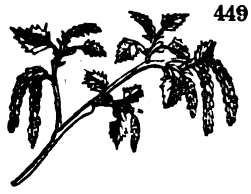

Leaf and Flower of the Birch.

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The Birch.

The Lime (*fig.* 451.) is nowhere, perhaps, rendered so subservient to the use of man as in the Russian dominions; and, on account of its great value, it is, by law, commanded to be planted on the borders of many of the great roads; and these trees furnish the bees with a large quantity of honey in their frequent flowers. Garden-mats, so extensively employed

* See Dr. William Howieson's "Account of the Forest Trees and Timber Trade of Russia," for an interesting account of this branch of the natural productions of the empire, and from which we would extract more largely, did the nature of the present work allow of our doing so.

in our country, and called bast-matting, are all imported from Russia, and are derived from the inner bark of the Tilia europæa. The same substance affords ropes, which, though wanting the solidity of hempen cordage, yet, being very cheap, and not liable to rot, are commonly used in many places for drawing water from the wells. To bark the limes for this purpose, it is customary to grow the trees in rows, and cut them every ten or fifteen years, generally in the month of May, at the time when they are full of sap, which renders the removal of their bark easy, so that it is pulled off in long stripes, measuring fifteen to twenty feet. As soon as the bark is dry, it is rolled up in bundles and kept in a cool place; and, when required for use, it is steeped for several days in water, by which the cortical layers, which constitute its thickness, become readily separable. The most internal part is the best, and is employed for making cordage: the exterior and coarser layers serve for strings to fasten corn-sheaves, and for hay-bands, &c. Mats were formerly manufactured in France from lime-bark; but the practice is now discontinued: a good paper may also be obtained from it. The trunks of lime trees, stripped of their bark, are employed according to their size; the larger ones by turners and the slenderer by vine-dressers and gardeners, for their ladders, and for the props of espaliers, &c.

The Lime.

The Beech, Maple, Elm, Alder, Willow, and Ash, are the other forest trees of northern Russia, for the Oak is scarcely known there; and these form but a small proportion in comparison of the Pine. On the outskirts of the forest, the Mountain Ash abounds. Its fruit is preserved in spirits, and used by the native Russians at their ordinary meals, salted with other wild berries. The value of the forest trees to the Russians is admirably summed up by Dr. Howieson, in the memoir above quoted. "They furnish them with fir timber of the finest kind, possessing the most durable and dense texture, and in the most profuse abundance, with no trouble but that of cutting down. Of this timber, as already mentioned, with the addition of a little dried moss, stuffed into the interstices, they construct their *isbas* or cottages, vapour-baths, and other buildings. In the interior, they make little or no use of brick, stone, or lime, except in the construction of churches, *peatches* or stoves, and chimneys. Their wooden *isbas* are also warm and comfortable, and superior, in such a climate, to those built of brick and stone; they are soon heated, and when once this takes place, they retain heat long. Of this timber their furniture and utensils are also made. In large cities, and in the houses of the nobility in the country, of late years, they are gradually introducing mahogany, which they get from America, at a reasonable rate, by vessels coming for Russian produce, which would otherwise arrive in ballast; and this they prefer, from its beauty, to the timber of their own growth, for making furniture.

"The peasantry have little or no tallow or oil: what they can procure is entirely consumed at the shrines in the churches, and before the images in the *isbas*. To supply the place of candles, they take long billets of that species of fir tree which abounds most in resinous matter; these they dry carefully near their *peatches*, during the tedious winter, and split, as occasion requires, into long pieces, resembling lath for a house. When a traveller arrives, or when a light is wanted, one of these is kindled at the *peatch*, and fixed in a wooden frame, which holds it in a horizontal position. It gives a bright flame, and burns for a short time, when another is substituted.

"The extensive forests furnish to the proprietor a considerable addition to his revenue, from the potashes, charcoal, and turpentine which they afford. The potash, or vegetable alkali, is made from every species of wood indiscriminately. When a sufficient quantity of ashes is collected, they lixiviate them, and pack them up in casks. These are conveyed down from the interior, by means of inland navigation, to Petersburg, Riga, and other seaports, where they are kept in extensive warehouses belonging to government. There they are broken up, the ashes collected in heaps, the good carefully separated from the bad, and repacked in the presence of the foreign merchant who purchases them. In passing through the country during the night, great volumes of flame may repeatedly be seen issuing from the woods; and, during the day, while travelling through the forests, it may be observed that many of the finest trees have their internal part burnt completely into charcoal, from the fire ascending up the centre of the trunk, while the bark remains entire, and seemingly uninjured. To make charcoal, they cut down every species of wood indiscriminately, form it up into large cones or piles covered over with turf, set fire to them, and allow the combustion to advance in a slow progressive manner for some days. The cone is then pulled down or scattered, the charcoal collected and sent to Petersburg, Moscow, and other great towns, where it is consumed in the large works of government, as powder manufactories, founderies, and in kitchens, in great quantities. The mass of wood consumed in these various ways must be very great.

"The forests supply turpentine, with little labour, and at almost no expense. It is the different species of Fir tree, or Pine, which yield this article: it is distilled from the bottom of the trunk, and the roots, which are left in the earth when the tree is cut down. These are dug up, and broken into chips by the hatchet, then put into the boiler, and the turpentine extracted by distillation, the refuse of the boiler furnishing fuel for the next fire. During the course of the day, with one of these boilers, a peasant will obtain, upon an average, four to five pounds of turpentine: and even this quantity might be considerably increased. If the number of stills, upon a larger and more economical principle, were increased, the quantity of turpentine which might be obtained in the course of a year upon the proprietor's estate might be very considerable, and would much enlarge his revenue.

"The forests also furnish materials for the roads. The young fir trees having their branches lopped off, are laid longitudinally across the road, close to each other, and covered with a layer of earth or sand, to fill up the interstices. Roads of this description are formed by the peasantry over hundreds of versts, and through marshy ground, which could only be done in a country where wood is in such abundance. Upon one part of the great Moscow road, however, they have lately been collecting large masses of stone, which they break down by fire of peat or moss placed under them, when they are rendered brittle by the severe frosts. It is among these forests that the wild honey is got, for which Russia is celebrated. Mead, made from it, is in great estimation among the peasantry, and is sold in the towns as a substitute for sugar, and various other purposes. Considerable quantities of this honey are annually exported to Great Britain and other countries. The wild bees make their hives in the hollow trunks of the aged or injured trees, where they are sought after by the straggling woodmen. The exportation of timber affords a considerable addition to the revenue of the government, as well as to the private fortune of the proprietors. It is a grand source of labour to the industrious peasantry settled upon the estates, and likewise to the shipping and inhabitants of other countries. These forests consist entirely of natural wood, which receives neither the care nor the industry of man during its growth. Labour, however, might be employed to much advantage in thinning and clearing away the superfluous trees when young, so as to allow the air to circulate freely among those which might be permitted to remain and grow up to a full size. In the forests, the trees are so thick that they destroy each other before they attain to any considerable size; and, in that way, it is only a few of the strongest which survive the general wreck. The wood of considerable girth, which was to be found in the vicinity of the roadsides, rivers, lakes, or canals, particularly in the neighbourhood of great towns, has been of late years cut down, and little or none but that of a stunted description remains in its place. The timber felled for the use of government, and for exportation, is now procured from a very great distance, hundreds and sometimes thousands of versts, into the interior; and that distance is gradually increasing. Even there, it becomes necessary to bring it a considerable way from amongst the forests, where it is cut down, to the lakes or rivers, by means of which it is floated to the seaport towns. Labour, however, in the interior of Russia, is of little value: it costs the nobleman next to nothing. The peasantry upon his estates, being a kind of slaves, receive no regular wages."

The brushwood, covering a vast extent of forest country, consists almost entirely of the Hazel, the Dwarf Birch (*Betula nana*), the Alder, Willow, and Juniper: the last growing to a large size, and loaded with fruit. In other places, the surface of the earth is covered with various wild berries, especially the Cranberry and the Bruisnika, or wild Bilberry. These various fruits are produced in the greatest abundance, and supply the peasantry with an ample and constant addition to their other food; they use them when fresh during the summer, and salted for winter. The peasant and his family seldom sit down to a meal which is not one half composed of these preserved fruits. The Vaccinium Oxycoccos (*fig.* 452.), or common Cranberry, is so much esteemed in Great Britain, that notwithstanding a large supply from the extensive wet moors of the north of England and south of Scotland, there is not enough for the consumption of the country; and the fruit is extensively imported from Russia, for the purpose of making tarts.

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The Cranberry

Subject. 3.—*Zoology.*

It is difficult to separate the Zoology of European Russia with precision from the Asiatic portion of this vast empire; although enough is known to show that each possesses peculiar features. The immense extent of territory stretching from the icy regions to the shores of the Black Sea may naturally be supposed to contain by far the largest proportion of the European animals; while, to the eastward, the great Ural mountains seem to impart to this Fauna several of those more characteristic of Western Asia. To dwell upon these geo-

graphic distinctions would be unsuitable to this work; we shall, therefore, confine ourselves to a brief notice of those animals which appear more peculiar to European Russia.

The quadrupeds are numerous. The dreary regions of Nova Zembla are frequented by the great white bear, which seldom passes beyond the limits of eternal snow: arctic foxes, and all the polar animals, are likewise met with. Towards the central provinces, wolves, brown bears, and the other European animals, abound in the forests; but the wild oxen, once known to inhabit Lithuania, are now extinct.

Three of the most remarkable quadrupeds, all of a smaller size, are, the Bobac, the Soulisk, and the Alpine or Calling Hare. The first is sometimes called the Poland Marmot (*Arctomys Bobac*) (*fig.* 453.): it is rather larger than the hare. Its habitations are not so lofty as those of the common Marmot; it prefers a dry soil, in which it digs very deep burrows; and so careful is it to secure warmth, that it amasses as much dry grass in a single burrow as will feed a horse for one night. The celebrated Pallas relates, that, when the bobacs have occasion to transport a quantity of provisions to their burrow, one of the party, lying on its back, is laden by the rest in the manner of a cart, and then all proceed in a party, drawing their companion by the tail to the common magazine. It must be confessed this story appears so incredible, that the illustrious name of Pallas alone induces us to repeat it.

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Poland Marmot.

The Soulisk, or variegated Marmot (*Spermaphilus Citellus*), is the most elegant of its genus; being spotted, or waved, with white on a brown ground. It is partially carnivorous; birds and small quadrupeds having been found in its hoards.

The Alpine Hare, or Pika, inhabits only the highest mountains of northern Europe, in the thickest and most sequestered forests. The instinct for amassing provision against winter is highly developed in these defenceless little animals. About August, they cut and collect large parcels of grass, which they spread and dry, and, in effect, convert into hay: this they collect into stacks about seven feet high; they then excavate a subterraneous passage from their burrow, which opens under the stack, and this road is used to give them access to their provision, during those months that a Siberian winter buries every thing under the snow.

Several birds, common in Russia, are but rarely seen in other parts of Europe. Among these may be mentioned the Cock of the Rock, the largest known species of grouse, nearly as big as a small turkey. The beautiful Rose-coloured Ouzel, or Starling, is not uncommon in the provinces bordering upon Asia; while the Pine Finch, the Cross-bill (*fig.* 454.), and a few others of less note, inhabit the dreary pine forests. In the plains has been found the Cream-coloured Plover, so rare a bird in Britain, that a specimen, shot in Devonshire, was once sold for nearly 30*l*. This is now in the British Museum. The European Bee-eater is said to breed in great numbers in the banks of the southern rivers.

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The Cross-Bill.

Domesticated animals. No recent information has reached us on the present breeds of the horse, ox, and sheep. The first are said to be large, strong, and even beautiful; but the ponies of Archangel are not larger than those of Shetland. The flocks of sheep appear to be numerous, and many of the breeds excellent. Whether the camel is really used in the southern provinces, as a common beast of burden, appears somewhat doubtful. The Russian greyhound has long and bushy hair, and the tail forms a spiral curl.

SECT. III.—*Historical Geography.*

The southern part of Asiatic Russia was known, under the name of Scythia, to the Greeks and Romans, who applied to it especially that appellation which was afterwards so widely extended. The expedition of Darius showed the Scythians to be exactly what the rudest Tartars now are,—a roving, nomadic race, constantly on horseback; who fought flying, and by their rapid movements, baffled, usually in a disastrous manner, every attempt of regular armies to subdue them.

The monarchy of Russia seems to have been first formed about the ninth and tenth centuries, under the reigns of Ruric and Vladimir the Great. At that time it held some intercourse with the court of Constantinople, and was converted to the Greek church, which has ever since been the established religion.

The invasion by the Tartars, under the successors of Zingis, in the twelfth century, formed a fatal era in the Russian annals. The whole country was over-run, its capital reduced to ashes, and the people completely subjugated under the yoke of Oriental despot-

ism. Despotic ideas, and eastern habits, derived from this source, have ever since continued to prevail in Russia.

The re-establishment of the monarchy, under the name of Muscovy, began in the fifteenth century, under Ivan Vasiljewicz. The Tartars, however, made a desperate stand; and it was not until after a series of victorious reigns that they were driven beyond the limits of Europe. During this period, the great republic of Novogorod, which had held the chief sway over northern Russia, was absorbed in the monarchy. A handful of Cossacks penetrated into Siberia, subdued the whole extent of northern Asia, and made the czars masters of an empire equal in superficies to the Roman. But the monarchy, though aggrandised in every direction, continued immersed in ignorance and barbarism, and had as yet no place or influence in the general system of Europe.

The civilization of Russia began with the reign of Peter, one of the most remarkable eras in the history of the world. The wonderful steps by which that prince succeeded in giving to his kingdom so great an impulse, are familiar to almost every reader. His patriotic magnanimity, in quitting his throne, and labouring as a carpenter in the docks of Amsterdam and Portsmouth; the active spirit of improvement introduced on his return, in defiance of all the prejudices of a people wedded in the most superstitious manner to ancient habits, produced a change the most rapid and striking ever effected upon any nation. Before the death of Peter, Russia had taken her station among the civilized powers of Europe. Since that time, her improvement has proceeded steadily, and her influence has been continually increasing. Under Catherine and her generals, especially, the conquest of the Crimea, the defeat of the Turks, the victorious wars in Germany, and the violent dismemberment of Poland, progressively increased the power of Russia, and brought her more closely into contact with the other members of the European system. But the events of the last war produced this effect in a much more remarkable degree; when Napoleon, after having subdued all the other powers, found in Russia alone one that was able to cope with him. That power, at length triumphing, became the centre of the confederacy by which his empire was subverted, and the independence of Europe re-established; in reward for which services, she hesitated not to claim a considerable share of the booty. In short, Russia is now, by many politicians, acknowledged as the most powerful state on the European continent.

Sect. IV.—*Political Geography.*

The government of Russia is despotism, under which the knout is administered even to nobles of the highest rank who may have incurred the displeasure of the sovereign. The emperors have, indeed, endeavoured in some degree to mitigate this absolute power, and have even formed a directing senate of sixty-two members, divided into departments; but this body is entirely composed of individuals nominated by the monarch, and serves little other purpose than that of promulgating his *ukases* or decrees. It is believed, indeed, to have sanctioned the murders of unpopular or weak sovereigns, which have so frequently stained the Russian annals; and which have been conducted with a secrecy, and been followed by an exemption from punishment, which show that they have been approved by the principal persons in the state. There are also hereditary nobles, who possess immense estates, estimated, not by the amount of lands or rents, but by the number of slaves; yet the titles conferred and recognised by the government are all military. The ranks of colonel and major-general are conferred, in a manner purely honorary, upon professors, and even ladies, as the only mode of raising them in the scale of society. Justice is administered with considerable care: conjointly with the judges are appointed assessors, who must be of the same rank as the person tried, and thus somewhat resemble our jury; but a general corruption, the inevitable fruit of despotism, and of the inadequate payment of the functionaries, is alleged to pervade this, and, indeed, all the official departments. It is not, however, to be denied that the views of the supreme government have, for the most part, been highly liberal, warmly devoted to the improvement of the empire, and to the moral exaltation of its people among the civilized nations of Europe.

Slavery is general in Russia. All the lands, with the exception of a few corners, are cultivated by serfs; and, as already observed, the value of a nobleman's estate is reckoned by the number, not of acres, but of slaves. The sovereign power has been generally exerted in a beneficent manner, to ameliorate the condition of the slaves, and to promote their emancipation, but hitherto with very imperfect success. Their treatment, on the whole, is far milder than in the West Indies: still the most abject submission is required, and the lash is in pretty general use. They frequently agree with their masters to pay them an annual rent, or *obrok*, on condition of their being allowed to migrate to towns, and to carry on trades. Many of them have, in this way, acquired very great wealth.

The revenues of Russia bear little proportion to the extent of her territory, her natural resources, or even her population. They arise from a capitation-tax of two rubles for each peasant, and five for each burgher; from which the nobles are nominally exempted, but they really pay it in the person of their slaves; a tax from merchants of 1½ per cent. on their capital; custom-house duties on imported goods; stamps, coinage, postage: government

assumes also the monopoly of distillation; and, in Siberia, the mines are wrought on its account, and the tribute of the subject races is paid in furs: but these last sources, subject to the usual mismanagement and corruption of the agents of an absolute government, produce probably very little. The total amount is supposed to be about 13,000,000*l.* sterling, burdened with a very large amount of debt; the greater part of which being depreciated paper-money, fetters greatly the operations both of finance and commerce.

The military force of Russia is the subject of anxiety and terror to Europe; and has, indeed, if official statements may be credited, attained to a most enormous amount. According to them, it rose, in 1820, to no less than 989,000 men, independent of the national guard. One simple fact may, perhaps, serve to refute this ridiculous statement, and tend to prevent Russia from overawing Europe by the immensity of her paper armies. When Bonaparte penetrated to Moscow, with 130,000 men, he outnumbered all the forces which Russia, in that utmost extremity, was able to bring against him. These were not estimated at much more than 90,000 men; some part of which was only half-armed militia. There might be 40,000 on the Turkish, and a few on the Persian, frontier; but, certainly, the utmost which Russia could summon, in that greatest need, was not more than 150,000; which the troops employed in garrison, in police service, and in guarding the Asiatic frontier, did not probably more than double.* The real strength of the Russian army has always consisted, not in its numbers, but in the passive and iron valour of its infantry, and the rapid and skilful movements of its irregular cavalry; the Cossacks, the Baschkirs, and other Asiatic nomades. Its field artillery also has commanded the admiration of the best tacticians. It has been boasted, indeed, that the new military colonies, when brought into full operation, will afford a regular supply of three millions of recruits. They consist of the crown peasantry, in all about six millions, who are formed into villages, and subjected to strict military discipline. The head colonist, or farmer, receives fifty acres, and a neat house, burdened with the support of a soldier and his horse: these, when not at exercise, or called out into actual service, assist in his agricultural labours. By this means, in 1820, there were organised 48,000 troops in three hundred and eighty-four villages; and it was proposed gradually to extend the system. But, besides that these could never be more than an ill-disciplined militia, their increase is opposed by various obstacles. The crown peasants, whose servitude before was little more than nominal, grievously complain of the present rigorous coercion, and of the burden of supporting a soldier-servant, whose aid is very doubtful, and who is more likely to act as a master. It would be very difficult to ensure the submission of these armed colonists; and, at all events, the number who could be marched out of the empire would be limited by the narrow amount of the funds out of which they could be supported.

To render Russia a naval European power, in which character she had no existence at the commencement of the last century, was the object of strenuous effort both to Peter and Catherine. A navy was accordingly created on the Baltic and Black Sea, which enabled Russia to become predominant in both. [The present emperor has shown a strong predilection in favour of the navy, which has of late years rapidly improved in the effective number of ships and men, and in its general organisation. In 1832, it consisted of 40 ships of the line, 35 frigates, 28 corvettes and brigs, and nearly 300 smaller vessels, manned by about 44,000 men.—AM. ED.]

SECT. V.—*Productive Industry.*

The industry of Russia is in a very unimproved state, owing to her long barbarism, the prevalence of slavery, and the thin population scattered over immense tracts of territory. These tracts, however, being in many parts of great natural fertility, yield a large amount of bulky and useful commodities, which can be exchanged for the delicate productions and fine manufactures of the south and the west.

The agriculture of Russia is extremely rude, and can never make much progress while all the husbandmen are enslaved and depressed. In the interior the plough is a wretched instrument, which, dragged by one horse, merely scratches the surface; and the harrow is composed wholly of wood. In the south alone can the land be said to be really ploughed; and, even there, the rotation of crops is very little understood. Nevertheless, in every part of Russia there is a surplus of grain: in the north, chiefly of oats, with some rye and barley; in the south, of the very finest wheat, in such abundance as might render this the granary of the west. The plains of the interior, especially between Petersburg and Moscow, are covered with extensive forests; and all its villages, with the greater part of its cities, are built of wood. This, however, being chiefly pine, fir, and birch, is little adapted for ship-building or solid constructions; but numerous large masts and deals are afforded for exportation. Cattle and sheep are reared in vast numbers, especially in the southern steppes; but little has yet been effected to improve the breeds: and the distance is such, that none of the animal products are exportable, except tallow, hides, horns, and bristles.

* [The army has since that period been placed on a much better footing, and the effective number in 1832 was not less than 686,000 men.—AM. ED.]

Hemp and flax are cultivated very largely, and yield not only the material of the staple manufacture of the country, but a large surplus for exportation. Bees swarm throughout the empire, rendering honey and wax superabundant. Some wine is made in the provinces along the Black Sea, but it has not attained any high reputation. Since 1827, however, very great exertions have been made to extend its culture, by introducing plants both from Bordeaux and the Rhine; and the prospects of success are said to be promising. The minerals, which form so great a proportion of the wealth of Russia, are brought chiefly from Asia; for the European side of the Urals is by no means so rich as the other. The same is decidedly the case with regard to its furs, the finest of which come from the remotest east of Siberia.

The manufactures of Russia, notwithstanding the efforts made by government, continue still in a rude state. The most national of them are coarse fabrics from hemp and flax, sailcloth, duck, sheeting, sackcloth; all of which are supplied by Russia, of better quality, and at a cheaper rate, than they can be had elsewhere. Government, also, by the high rewards with which they have allured foreign manufacturers, has succeeded in establishing extensive fabrics of iron and hardware, particularly of arms. The chief seat is at Tula, the manufactures of which are a subject of controversy. Mr. Tooke, and some foreign writers, represent their products as equalling the finest of Birmingham and Sheffield; Dr. Lyall asserts that the articles cannot come into any sort of competition with English, but yet that many are showy and elegant, and that the muskets have done greatly too much execution to allow us to suppose them extremely defective. Government has also been able to establish silk and cotton works in the two capitals, but not sufficient for internal supply. Coarse woollens, in great quantity, are articles of domestic manufacture for family use.

The commerce of Russia is very considerable, in consequence of her large surplus of rude produce, and of the extensive wants which luxury has created, and which can only be supplied from abroad. The interior communications from one end of the empire to the other, are of vast extent. The rivers which intersect its wide level plains are almost all navigable; and those which flow into the Baltic approach closely to others which direct their course to the Euxine and the Caspian; the Dwina to the Dnieper, and the Neva to the Volga. By a channel, also, which will be afterwards delineated, there is an almost continuous navigation, with short portages, across Siberia. Furs, gold, silver, iron, copper, of great amount and value, are brought from that part of the empire: in its extreme point at Kiachta, the Chinese merchants meet the Russian; and from its border numerous caravans proceed into the interior of Tartary; while Persia is visited across the Caspian. The grand rendezvous of all these products is at the fair of Nizni Novogorod, in the south of Russia; which, both for the amount and variety of the articles produced in it seems to be the very first in Europe. Here the sugar and coffee of the Indies, the wines of France, the cottons of Britain, meet the silks and teas of China, the furs of Yakutsk, and the gems of Bucharia. The quantity of goods sold at this fair amount, according to Klaproth, to ninety-four millions of rubles (about 15,000,000*l.* sterling); a sum which we cannot but think greatly exaggerated; and still less can we listen to Dr. Lyall and Captain Cochrane, who raise it to double the amount. The following quotations from Klaproth may give at least an idea of the proportion between the different articles. Furs, 5,000,000 rubles; teas, 12,000,000; silks, velvets, damask, &c., 23,500,000; woollen cloths, kerseymeres, &c., 7,300,000; muslins, and other cotton stuffs, 5,000,000; mixed silk and cotton, 2,500,000; raw cotton from Bucharia, 2,900,000; raw silk, 400,000; pearls, precious stones, shawls, &c., 1,280,000; arms and iron utensils from Tula, 540,000; the same from Siberia, 10,360,000; alum, vitriol, and other colouring substances, 3,600,000; porcelain, 525,000; crystals, 515,000. The foreign commerce of Russia is limited, by its holding only interior corners, as it were, of inland seas, the openings of which belong to powers independent, and liable to become hostile. Thus, the entrance of the Black Sea is possessed by its natural enemy, the Turk; that of the Baltic may be shut by Britain, a precarious ally. When, however, the ports are not closed by war, the amount of the rude produce exported, and of the manufactures and luxuries of Western Europe imported, is very large. The amount stated for 1830 is 274,312,128 rubles exported, and 198,132,812 imported; but these are paper rubles, worth only about eleven pence. Exclusive of the above, the gold, silver, and bank-notes exported in 1830 were estimated at 5,033,452 rubles; while those imported were estimated at 71,097,160. Tallow is by far the most valuable article of export: the quantity exported in 1830 amounted to 4,091,544 poods (36 lbs. each); of which 3,223,434 poods were for England. The next great articles are flax and hemp, wheat, iron, timber, bristles, tar, &c. Colonial produce, particularly sugar, cotton-twist, wine, dyewoods, silks, &c., form the principal articles of import. During the year 1830, 5690 ships entered the different ports of the Russian empire, exclusive of those on the Caspian Sea: of these, 1681 ships were from Great Britain, 1623 from Turkey, 513 from Holland, 384 from the Hanse Towns, &c. During the same year, 5907 ships cleared out from the different Russian ports: of these 1637 were bound for Great Britain, 312 for Turkey, 501 for Holland, 415 for the Hanse Towns, &c.

The canal navigation of Russia, so far as it has hitherto been carried, has been exclusively

the work of government. The grand object was to connect the Baltic with the Volga, and thus make it communicate with the Caspian, and form a continuous navigation across the whole empire. This was effected by joining the Twertza, a tributary of the Volga, to the Mtsa, which falls into the Lake Ilmen, whence, by the Volkof, the Lake Ladoga, and the Neva, there is a navigable line to Petersburg. The steep descent of the river Mtsa, however, presented a difficulty which even Peter could overcome only by a peculiar process. Water sufficient can be collected only once in eight or ten days, and all the vessels assembled in the course of that time are summoned, by beat of drum, and shoot down, one after the other. In proceeding along the Mtsa, for 33 versts, they have successive difficulties to encounter; and, as they cannot reascend these steeps, they are broken up for firewood. At Petersburg, the canal navigation of Russia had fallen into considerable neglect, till 1817, when Alexander provided funds, amounting to 5,000,000 rubles, to be applied to its improvement. He created an office of "director-general of the ways of communication," including canals, roads, and bridges. The Duke of Wirtemberg, who was appointed to this situation, made a general survey, and found extensive repairs and improvements necessary, particularly in the above-mentioned grand line of communication. Great exertions were requisite to supply with water the scanty streams by which it was maintained. One of the principal improvements was the union of the lake Schino to that of Velio; an undertaking begun in 1778, and carried on with much fruitless expense, but completed in 1825. By this supply, and those drawn from other quarters, the navigation was so much improved, that in 1826, a caravan, as it is called, of 1000 barks ascended without meeting with a single accident. Great improvements were also made in the canal of Ladoga, though it is still liable to want of water in dry seasons; but in 1826, when this deficiency was felt, the Duke, by powerful steam-engines, poured into it the waters of the Volkof and of Lake Ladoga, and thus enabled the barks to proceed.

The canal of Lias, commenced in 1802, and finished in 1814, joins the Tikhvine, which falls into Lake Ladoga, to the Lias, a tributary of the Mologa, which falls into the Volga. This line is navigable only for boats of about 20 tons; but it has the advantage over the other of being passable in both directions, and hence is extensively employed in the conveyance of goods from Petersburg to the interior.

The line of Maria is formed by the union of the Konja with the Vitegra, by which the Volga is connected with the Bieloe, or White Lake: hence by the Chicksna, the lake Onega, and the Suir, barks reach the Ladoga. This affords a good navigable channel, but it forms a circuitous route for Moscow and the interior provinces, and serves chiefly for conveying to the capital the products of Siberia.

The following is a view of the navigation on these three great lines, and its value in rubles in the year 1828:—

		Crown Property.	Private Property.	Total.
To Petersburg.				
By the Vichnei Volotchok, barks	8,916	22,148,000	81,386,000	103,534,000
rafts	1,378			
Tikhvine, barks	2,091	651,000	14,849,000	15,500,000
rafts	1,448			
Line of Maria, barks	2,431	3,015,000	9,857,000	12,872,000
rafts	5,562			
From Petersburg.				
By the Vichnei Volotchok, barks	2,411	.....	1,160,000	1,160,000
Tikhvine	1,520	.....	18,179,000	18,179,000
Maria	1,358	.....	784,000	784,000

Other important undertakings,—the junction of the Markta and the Volga, the Oka and the Don, the Priepicz, the Niemen, and the Bog, the improvement of the navigation of the Dnieper,—have been projected, and some of them are in an advanced state.

The roads of Russia are not in general good; yet the level nature of the country, the abundance of timber and cattle, enable the numerous caravans to move at a very cheap rate. The high road from Petersburg to Moscow is a very remarkable work. It is an elevated causeway of timber, carried in one long, level, unvarying, straight line over marsh and bog, and through thick forests of birch and fir. Being composed, however, only of round trunks of trees, often ill-joined together, it is in many places exceedingly rough.

SECT. VI.—*Civil and Social State.*

The population of Russia, which, in 1722, was rated, probably too low, at 14,000,000, had risen, in 1762, to 20,000,000; in 1795, to 36,000,000; in 1818, to 45,500,000; and, in 1824, to 50,000,000.* But this increase, independent of probable omissions in taking the census,

*[Including Poland, the total population of the Russian empire in 1832 could not be less than 65,000,000, of which 56,800,000 were in European Russia.—AM. ED.]

arises in a great measure from the extensive conquests effected during the lapse of this century; the Crimea, the Caucasus, more than half of Poland, and the whole of Finland, have augmented by nearly one-half the mass of the empire as it existed in 1722. The last increase of 4,500,000, between 1818 and 1824, may be considered as exhibiting the natural progress of population, somewhat aided by emigration from the poorer districts of Germany. It gives a rate of one-tenth in six years; and a duplication in sixty years; which, however, affords little support to the anticipation of M. Stchekaloff, that Russia, in 1892, will contain 230,000,000. There is no doubt that she has natural capacities enabling her to reach that number; but heavy chains weigh on her productive industry, which may not be broken for several ages.

Of these 50,000,000, European Russia contains only 34,000,000: about 11,000,000 belong to the acquisitions in Poland,* and the remainder to Asiatic Russia. The basis of this great population is entirely Sclavonic; a race distinguished by a peculiar language; by a patient, hardy, obstinate, and enduring character; by a very limited extent of intellectual culture, and of the characteristics which raise man above the brute. This last deficiency, however, we should be very little disposed to regard as the fixed doom of any particular race of men. It appears the consequence of long ages of bondage and oppression, and of the insulated position of this people in the heart of these immense steppes and deserts; removed from all the impulses which have rendered the western nations so enlightened and energetic. There are about 3,000,000 of the Finnish race, occupying the acquired provinces of Livonia, Esthonia, and Finland, the shores of the Northern Ocean, and some tracts along the borders of Asia. Tartars also inhabit the Crimea, and have penetrated into some of the southern steppes. The great body of the nation is divided, without medium or gradation, into the distant classes of nobles and slaves. The few who struggle between these opposite extremes are insulated and unprotected individuals, who can scarcely attain a place or character in society.

The nobles are the body chiefly acted upon by that forced and imported civilization, by which Peter sought to convert the nation at once from the depth of barbarism to the highest pitch of refinement. In fact, as to outward aspect and manners, this body, especially that great proportion who have travelled, are scarcely to be distinguished from the most brilliant society of the western courts; and among the number are included many well-informed, intelligent, and liberal individuals. Their cultivation, both as to manners and intellect, is principally derived from France, whose language is almost exclusively spoken at court, and whose writers alone are generally read; but the gay polish of French manners harmonises ill with the remnants of Muscovite rudeness. Many of the nobles boast a high descent, tracing their origin even to Ruric; a claim not admitted by the court, which studies to merge all distinction in military rank, real or fictitious. Their fortunes are in some cases truly enormous, especially when compared with the cheapness of provisions. The head of the Scheremetov family, reckoned the richest, is said to have 125,000 slaves, estimated at 150 rubles each. The nobles generally spend these estates in profuse and ostentatious hospitality; combining, though not very tastefully, the open house of the feudal baron with the elegance and splendour of Parisian luxury. The gradations of rank are observed not only in the places assigned at these long tables, but in the viands placed before them; so that, while the guests near the master of the house are regaled on sturgeon and champagne, those towards the lower end partake of *sauer kraut* and black cabbage broth; nor can a guest, without the violation of all propriety, solicit food that does not belong to his station. An immense household of servants, amounting in country residences not unfrequently to 500 or 600, and an extraordinary profusion of silver plate, are the two reigning points of magnificence; but, unluckily, these luxuries are often alloyed by some failure as to cleanliness, both of person, furniture, and dishes. What is worse, an absence is in many instances observable of that nice sense of honour which forms the pride of a gentleman. It was under Peter I. that Prince Menzikoff and the governor of Ingria were whipped for peculation; but it is said that the difficulties in which the profuse expenditure of the Russian nobles often involves them, are still sometimes met by expedients which we should consider as quite incompatible with the character of a gentleman. However, they have entirely renounced the national habits of intoxication, originally so strong, that Peter the Great deemed it necessary to prohibit ladies from getting drunk at a ball, but durst only fix for gentlemen a limitation as to time. We wish it could be added that ladies of rank were equally distinguished for their domestic and conjugal virtues; of which, indeed, some bright examples may be found; but the French modes of life, and the dreadful examples set by Elizabeth, Catherine, and other empresses, have found but too many imitators, and have rendered manners, in this respect, looser than in any other European court.

The slaves, the other dire extreme of Russian society, form still the great mass of the people. In 1816, the peasants of the crown amounted to 6,353,000; those of private

* [It will be observed that this estimate does not include the kingdom of Poland, but only the former Polish provinces of Russia.—Am. Ed.]

individuals to 9,757,000; in all, 16,110,000. This ill-fated class is divested of every right, political and personal, scarcely excepting that of life. The master has the full power of the scourge, which is liberally exercised, and of every other corporal punishment which does not produce death in twenty-four hours. There is, indeed, a law by which the master may, in that case, be brought to justice; and there are marshal's courts, to which, in certain cases, the slave may appeal; but these means of redress are practically very precarious. The crown has done every thing in its power to forward emancipation; but as it never has ventured upon compulsory statutes, and as the nobility remain rootedly attached to the *good old* system, little impression has been made on the great mass of bondage. The cultivating peasant has a spot of land, for which he pays *obrok* or rent, which is apt, indeed, to be unreasonably screwed up by a necessitous landlord; but otherwise he labours and earns for himself. Some villages have even raised large sums to relieve an esteemed master from the pressure of necessities which would have obliged him to sell his estate, and transfer them to another proprietor. Those who, on payment of personal obrok, practise trades in cities, often attain to opulence; a slave of Count Scheremetov is mentioned as carrying on a manufactory that employed 4000 persons; and a slave of Count Strogonov constructed the Kasan church, the finest in the capital. Still all the profits earned by the slave belong by law to the master; but public opinion has established such a bar against his taking more than a proportion, that it happens only in a very few instances. A certain moral degradation is almost inevitably entailed on their unfortunate destiny. A profound craft, a sulky obstinacy, a studious concealment of every quality and possession of which their master could avail himself, are habits natural to the slave. He shows, however, a stubborn acquiescence, which somewhat resembles contentment; an untameable passive courage, and a constant thoughtless cheerfulness and good-humour. The Russian slaves have a surprising talent at imitation, common among enslaved and uncultivated minds. The master distributes household employments among numerous slaves, without any consideration of natural talent, or almost any instruction, except the cudgel; yet the functions of each are executed with a surprising degree of correctness. From the period of their subjection by the Tartars, they have retained some oriental habits; of these the most remarkable is the use of the vapour bath, which, under some form, is a necessary appendage to every village, even under the frozen climate of Archangel. It is considered as equally conducive to pleasure and to health; and even in the farthest north, the delight of the bathers is to come out reeking hot, and roll themselves in the snow; which process, instead of killing them, as might be expected, is said materially to invigorate the frame.

The religion of Russia, so far as relates to establishment, is that of the Greek church, which is professed with many superstitious observances. The worship of images is carried to a great extent, though the letter of the scriptural prohibition is sought to be evaded by having only the drapery in relief, and the face flat and painted. With these representations, not only the churches are filled, but every serf has one in his cottage, to which he pays sundry and uncouth acts of obeisance. Fasts are frequent, long, and rigidly observed; but at the festivals they indemnify themselves by an excess of eating, which not unfrequently proves fatal. In no cities, perhaps, are religious ceremonies and processions celebrated with such pomp as at Petersburg and Moscow. The long trains and gorgeous robes of the priests, the glittering insignia waved over them, the blaze of thousands of tapers, and the innumerable crowds of assembled devotees, are said to eclipse every scene of similar splendour in Spain and Italy. The festival of the Resurrection is the most splendid; and next to it those on the two, certainly natural, occasions, the breaking of the ice on the Neva, and the first springing up of verdure from the long-frozen earth. Russia had once a patriarch (*fig.* 455.), almost equal in power to the Catholic pope: but Peter, jealous of his functions, assumed them to himself; and his successors have ever since exercised them. The parish priests have slender incomes, eked out by fees: they are ignorant, vulgar, and belong almost to the lowest class of society. They amuse the people with shows and observances, but seem scarcely capable of communicating to them any moral or spiritual ideas. Instead, however, of being bound to celibacy, they are laid under an obligation to marry; in the hope, it is said, of rendering their conduct more regular, but without always securing that result. The higher orders of clergy are all monks, well endowed, living usually retired and regular lives, and often possessed of considerable learning; but they come little in contact with the body of the nation. Of these there are thirty-three bishops and archbishops. The secular clergy have been estimated at 160,000, and their places of worship at 70,000. There are 480 monasteries, and 156 nunneries. The Lutherans, estimated at 2,500,000, are nearly confined to Finland and Livonia. The Crimea, and some other southern districts, are Mahometan. The Catholics and Unitarian Greeks are nearly confined to the Polish provinces. The Russian government professes, and generally administers, an absolute toleration, and even equality of rights among the different religious professions: yet the caprice

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Russian Patriarch.

of despotism sometimes issues very tyrannical mandates. Such was the recent one, prohibiting the Jews from exercising any of the trades by which they have hitherto gained a subsistence, and enjoining them to apply solely to agriculture, which they had always shunned; and another, by which they were banished from both the capitals.

The introduction of literature has been an object of anxious concern to the Russian monarchs, who have yet been able to illuminate only partially the night of ignorance in which their vast empire is plunged. The chief scientific glory of Russia arises from the names of Pallas, Gmelin, Euler, Bernoulli, and other German savans, whom the bounty of Catharine induced to form either a permanent, or at least a temporary, residence at Petersburg. French literature, however, has always been the most fashionable in the higher Russian circles; though, with the two exceptions of Grimm and La Harpe, the French savans have in vain been invited to exchange the delights of Paris for the frozen splendour of the northern capital. The Russian is beginning to be a written language: there are said to be now 8000 works printed in it, which, however, is not very much more than the number annually published in Germany. Lomonosoff and Sumorokoff rank as the greatest Russian poets; and Karamsin, by his writings in different branches of the belles lettres, has of late drawn attention even beyond Russia.

The public establishments for science in Russia are highly endowed and patronised. The Academy of Sciences, planned by Peter the Great, was founded by Catherine I., who assigned to it a revenue of 5000*l*. The society was regulated by the advice of Wolf and Leibnitz; and several of the greatest modern names have adorned its annals. Gmelin, Pallas, and others of its members, have been employed, at great expense, in exploring the most distant provinces. The Academy of Arts was founded by Elizabeth, but enlarged by Catherine II., who allowed it 12,000*l*. of annual revenue, to be employed in supporting 300 pupils, and in procuring the best models of every kind. The library has never become very extensive, but is rendered curious by the ancient manuscript chronicles; and by a collection of Chinese works, amounting to 2800. The museum has many interesting and peculiar features derived from the mineral products of the empire, particularly a vast mass of native iron found in Siberia, fossil remains of the mammoth and other gigantic animals; the dresses, arms, and implements of the rude nations of Siberia and Tartary; the ornaments found in the tombs of the Altaï. The imperial library is also extensive; and a fine cabinet of paintings has been formed by the purchase of the Crozat collection, the Houghton, formed by Sir Robert Walpole, and others of inferior magnitude. The university of Petersburg was founded in 1804, by the emperor Alexander, and endowed with an income of 130,000 rubles.

The Russian habitations, so far as relates to the palaces of the nobility, and to the public buildings, which are all erected by the crown, are formed on the model of the rest of Europe, and display a magnificence elsewhere unrivalled. All the others (*fig.* 458.) are miserable in the extreme, calling to mind the first rude efforts of man after he came out from the hollow of the oak. They consist merely of the trunks of trees, not even formed into logs, the interstices filled with moss and clay, and the light usually admitted by square open crannies: thus they resemble casual piles of timber rather than human dwellings. Hence the chronicles use the expression "cutting a town," because the felling of the timber is the only arduous part of the process.

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Russian Village.

The national amusements are chiefly those afforded by the ice; for here, as all over the North, the gayest season is when its impenetrable surface covers all the earth and the waters. The Neva is entirely occupied by parties skaiting, running sledge-races, and enjoying other sports of the season. A favourite diversion is afforded by the ice-hills, on whose sides are formed steep inclined planes, down which the adventurer throws himself, seated on a machine which he guides with surprising skill. Swinging is another Russian diversion; to which may be added the common ones of dancing, and of a national music, which, with the songs and ballads to which it is sung, is very plaintive and pleasing.

The national dress of Russia consists of a long coat reaching to the calves of the legs, with numerous tucks at the bottom of the waist; a vest of coloured linen, leaving the neck bare; thin boots, or shoes, of the bark of the linden. In winter, a sheepskin pelisse is substituted for the coat. The dress of the higher ranks is now formed studiously on the European model, though no other part of Europe can rival the gorgeous robes worn by the nobles and bishops on public occasions, or the profusion of diamonds which covers their persons, making them appear all in a blaze.

The staple food of the Russian peasants consists of black rye bread and cabbage broth, thickened with oatmeal, which Dr. Clarke mentions with horror, but which, according to Dr. Lyall, may be made far from unpalatable; sometimes salted or frozen fish. The standing drink is their favourite *quass*, made by pouring warm water on rye or barley-meal. The

rich cover their tables profusely with French wines and the most delicate dishes, among which sterlet from the Volga, and veal from Archangel, are highly valued. The preliminary use of salt fish, cheese, and brandy, as a whet, is as general here as in Scandinavia.

SECT. VI.—*Local Geography.*

Divisions.	Square Miles.	Population.	Principal Towns.			
Baltic or East Sea Province.						
Petersburg	18,090	808,512	Petersburg	425,000	Cronstadt	40,000
Finland	134,444	1,346,139	Abo	11,300	Helsingfors	8,000
			Wiborg	3,900		
Esthonia	6,890	396,032	Revel	15,000	Narva	3,800
Livonia	20,110	737,734	Riga	30,000	Dorpat	6,000
Courland	9,544	568,690	Mittau	12,000		
Great Russia.						
Moscow	10,500	1,289,898	Moscow	240,000	Kolomna	5,809
			Mojaisk	3,944		
Smolensko	22,088	1,297,055	Smolensko	12,000		
Pskof or Plescof	22,203	783,945	Plescof	12,000		
Olonez	80,789	352,004	Olonetz	3,000		
Novogorod	56,551	915,500	Novogorod	10,000		
Archangel	346,133	162,666	Archangel	16,000		
Vologda	163,712	802,178	Vologda	14,000		
Kostroma	38,570	1,422,700	Kostroma	9,000		
Nizni-Novogorod	20,501	1,349,508	Nizni-Novogorod	12,000		
Vladimir	18,669	1,306,046	Vladimir	3,000		
Tula	11,904	1,093,721	Tula	35,000		
Kaluga	12,736	1,159,600	Kaluga	25,000		
Tver	24,213	1,233,358	Tver	24,000		
Jaroslaw	14,528	1,022,991	Jaroslaw	28,000		
Kursk	14,954	1,611,109	Kursk	25,000		
Orel	16,779	1,270,085	Orel	22,000		
Riasan	14,553	1,270,291	Riasan	5,000		
Tambof	22,869	1,391,400	Tambof	15,000		
Voronetz	32,487	1,436,357	Voronetz	15,000		
Little Russia.						
Kiev	17,557	1,353,800	Kiev	40,000		
Slobodak Ukraine	21,717	1,471,000	Tcharkof	18,000		
Tschernigoff	22,988	1,378 500	Tschernigoff	10,000		
Pultown	16,810	1,933,000	Pultowa	10,000		
South Russia.						
Catherinoslav	29,757	944,094	Odessa	30,000		
Cherson	25,728	523,600	Cherson	10,000		
Taurida	43,562	437,498	Sympheropol	20,000	Bakitchiseral	8,000
Bessarabia	18,711	310,000	Bender	10,000		
Don Cossacks	77,034	398,103	Tcherkask.			
Kingdom of Kasan.						
Kasan	22,272	1,138,804	Kasan	40,000		
Viatka	47,381	1,285,900	Viatka	12,000		
Perm	127,017	1,232,474	Perm	15,000		
Simbirsk	29,910	1,095,145	Simbirsk	15,000		
Penza	16,597	1,044,824	Penza	11,000		

The grand local division of Russia is into provinces, and these into governments. The provinces, equal in extent to great kingdoms, are, the East Sea Province, Great Russia, Little Russia, South Russia, and the kingdom of Kasan. This last has of late been often considered as Asiatic; yet the character of the country, and the natural boundaries, lead us to agree with Arrowsmith, who, in his last Atlas, has made it European. West Russia, and the kingdom of Poland, belong to Poland.

The East Sea Province forms no part of the original domain of Muscovy. It consists of provinces conquered chiefly from Sweden. Ingria (now Petersburg), Livonia, and Esthonia were wrested by Peter from Charles XII., at the unfortunate conclusion of his adventurous career; Finland, by Alexander, during his unjust invasion, in the last war; Courland from Poland, previous to the partition. These provinces form a flat dreary country, buried in snow during half the year, covered with gloomy forests of birch and pine, and yielding only in favourable spots the coarser kinds of grain, oats and rye. Yet, from the moment of their acquisition, they were considered the brightest jewel in the Russian crown. They opened to Russia, for the first time, a direct maritime communication with the civilized world. To this quarter, therefore, the seat of government was immediately transferred: it became the centre of commerce; and within its precincts Peter erected his new capital.

Petersburg (*fig.* 457.), the entire creation of its great founder, is built altogether upon a plain; and is the most regular, and, in appearance, the most splendid capital in the world. It has no old, dirty, irregular quarter, abandoned to traffic, and shunned by all the opulent and refined; no straggling suburbs. It is "a city of new palaces;" wanting thus, however, the solemn and venerable effect produced by structures that belong to a former age. Except,

too, a few of the palaces and public edifices, which are of marble and granite, it is built of brick, covered with a plaster resembling stone, but which can never have its rich and substantial effect. Petersburg is built entirely amid the waters; it occupies the south and north banks of the Neva, comprising several large islands enclosed by its channel. The ground on

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Petersburg.

which it stands being almost on a level with the river, it is exposed to a dreadful danger,—that of inundation. When a strong and continued west wind blows in the waters of the Gulf of Finland, the Neva rises sometimes eight feet, and overflows the whole city. It was supposed that the raising of the ground, and various precautions, had diminished the hazard of this calamity; but it took place, in 1824, on a more awful scale than ever. For two days Petersburg and its neighbourhood were covered as with a sea, in which wagons, furniture, boats, provisions, even wooden houses and coffins, floated in confused masses. Eight thousand people were supposed to have perished, and the destruction of property was immense.

The streets and edifices are divided into several compartments, separated from each other by the interposed channels of the Neva. The principal is what is called the Admiralty quarter. It is situated along the south bank of the Neva, which, here forming a species of elbow, converts the quarter, as it were, into a large triangle. It is faced towards the river by a most magnificent granite quay, extending three miles in length. Here are grouped all the most magnificent structures of Petersburg, which resemble a vast range of palaces; and, to those who enter from the desert country around, produce the effect of enchantment. The Admiralty itself, a quarter of a mile in length, presents, perhaps, the longest façade in Europe, richly ornamented, though not, throughout, in the purest taste. Three broad and fine streets, about two miles long, branch from this central edifice, which terminates the vista of each. The grandest structure, however, is the imperial winter palace, 450 feet long, 380 broad, and which, with an adjoining wing called the Hermitage, contains the most valuable of the imperial collections. On a smaller scale, but of still richer materials, is the marble palace, resting on a basement of granite, and roofed with copper. The new bank is also considered one of the chief ornaments of Petersburg. But the greatest of all is the cathedral church of Kasan (*fig.* 458.), in the second Admiralty quarter, one of the most splendid structures that modern art has produced. It was begun in 1800, and finished in fifteen years, at an expense of 15,000,000 rubles. The design, though good, was not the very best that was presented; but being the production of a Russian slave, feelings of patriotism caused it to be preferred. It was executed entirely by Russian workmen, and of materials which, though of the richest description, were all furnished within the empire. The cupola is criticised as too small, and some other defects are pointed out; but the forest of 150 columns in front combines, with its splendour, a purity of taste, which could scarcely have been expected from a semi-barbarian artist. All the materials and ornaments are of the richest description. In the same quarter is the colossal equestrian statue of Peter the Great, chiefly remarkable for the mass of black marble on which it is placed, weighing 1500 tons, and in this respect incomparable. The Vasili Ostrov (Basil's Island) is the chief insular compartment, containing the custom-house, exchange, and other establishments for commerce; and, by a singular combination, the academies of science and art. The island which bears the name of St. Petersburg, and the quarter of Wiborg, on the northern bank, include the remains of what was the original city, or rather village, with large additions, but still retaining more of a rural character than the rest. The Foundery quarter is distinguished by the large establishments bearing its name, but still more by a very superb structure of Catherine, called the Taurida palace. At the

Cathedral Church, Petersburg.

end of a vestibule and hall, both of immense extent, and adorned with vast ranges of columns, statues, and vases, appear gardens which, in winter, while all the world without is buried in ice and snow, present the most brilliant hues of summer. Being enclosed in a spacious saloon, they may be considered as a vast conservatory. The islands and opposite banks of the Neva are connected only by pontoons, or bridges of boats, which, on the approach of ice, are removed in two or three hours; and the ice-then supersedes every other bridge. Mr. Coxe saw a magnificent design, by a Russian, of a wooden bridge with a single arch, to span the breadth of 1000 feet; but it has never been executed. The population of Petersburg amounted, according to the Gazette, in May, 1829, to 425,000, including military. In 1764 it was only 164,000. Of these, only about 340,000 are stationary; as 55,000 belong to the naval and military services, and 25,000 are foreigners. The original Finnish inhabitants do not now exceed 40,000. The ground in the vicinity being barren, the city is supplied from a great distance; with cattle from the Ukraine; grain, and even timber fuel from the provinces on the Volga; yet the sure demand produces a steady supply. Petersburg is a place of very great trade. The value of the imports, in 1830, amounted to 145,000,000 rubles, and of the exports to 111,000,000 ditto. During the same year, 1483 ships cleared out from Petersburg, of which 753 were British. Most part of the foreign trade of Russia is in the hands of foreign merchants, of whom the English are the principal.

Among the environs of Petersburg we may mention the palaces of Oranienbaum, Peterhoff, and Czarskoje-Selo; which are merely spacious country-houses, with agreeable gardens in the English style attached to them. A much more important object is Cronstadt, at the mouth of the Neva, the grand naval arsenal of the empire. The fortifications on the sea-side are very strong; and form, indeed, the only defence of the capital, which, towards the land, is almost quite open. The docks are extensive and commodious; and the largest, alone, of the three harbours, will contain 600 sail. Although Russia be considered so great a magazine of naval stores, the construction of ships of war is by no means very cheap, as the northern provinces produce only fir, and oak must be brought from Kasan, on the borders of Asia. The population of Cronstadt is about 40,000.

The provinces on the southern coast of the Gulf of Finland are flat, interspersed with lakes and marshes; but they contain many fertile tracts, which, if better cultivated, might yield plentifully the hardy kinds of grain, rye, barley, and oats. They were acquired in the thirteenth and fourteenth centuries by the Teutonic knights; and the higher and ruling population thenceforth became German: while the Finns, the natives, were reduced to the state of vassalage, in which they still remain. They were then successively conquered by Sweden, Poland, and Russia. The nobility still enjoy some privileges, and meet in provincial states; but the peasantry are oppressed, notwithstanding efforts made by the Russian government for their relief. Riga, the capital of Courland, is one of the greatest emporia of the North. The imports, in 1828, are said to have amounted to 15,599,000 rubles; the exports, to 38,826,000 rubles: the number of ships which entered was 1162; those which went out, 1180. More than two-thirds of its trade is with England, the rest chiefly with Holland and Denmark. Riga is very much a German town, neat and well built, without any remarkable features. There are some scientific establishments. Dorpat is an agreeable town, situated in the best part of Livonia, having a pretty brisk inland trade, and being, since 1802, the seat of a well-endowed university. Revel, the capital of Esthonia, is an old irregular town, tolerably fortified, and with an excellent harbour, where there is some trade in the usual Russian staples. Narva, a neat German-looking place, formerly belonging to the Hanse Confederacy, and still retaining some trade, is chiefly distinguished for the signal, though ultimately fruitless, victory here gained by Charles XII. over his great rival.

Finland, a recent ill-acquired possession, seems now finally united to the Russian empire. The Finns are still attached to Sweden; but, being well treated, their trade protected, and their national customs respected, they acquiesce with tolerable patience. The country is almost a counterpart of Sweden; "a succession of hill and dale, abounding in forests of fir and beech, interspersed with numerous lakes, and thickly overspread with shattered fragments of granite." During the winter it is covered with a hard uniform surface of snow and ice, in which the roads are marked by boughs of fir laid along them. The Gulf of Bothnia, between Finland and Sweden, is then entirely frozen over, and sledges drive across it, beating for themselves a smooth and hard road, which is only a little dangerous at the commencement and close of the season. The Finns are a race by themselves, and speak a language which is quite distinct from that of any of their neighbours, and seems to be in its origin Asiatic. They are on the whole a patient, laborious, well-disposed people.

Abo, the capital, is situated on the promontory which connects the Gulfs of Bothnia and Finland; a fortunate position, which enables it to carry on all the trade of the country. This city, however, has been laid waste by a recent fire, which has consumed the university, its museum, and library, and many other public edifices.* Helsingfors contains a naval arsenal

* [The university of Abo has been transferred, since the fire, to Helsingfors.—AM. ED.]

of some magnitude, but is chiefly important from the vicinity of Sweaborg, the northern Gibraltar. This fortress is composed of three islands, united to each other by bridges; the works are partly blasted from the rock, and partly built of the granite which composes it. They mount upwards of 800 pieces of cannon, and can accommodate 12,000 men; while a well, sunk in the rock, secures it against any danger from the want of water. All these advantages of nature and art have been fruitless; and Sweaborg, on each occasion, when it ought to have been the bulwark of Finland, was surrendered by treachery. Wiborg, the capital of all that part of Finland which Peter the Great rendered Russian, and of all that region before Petersburg existed, presents some marks of former splendour. Tavasthus is a rude wooden town, forming a sort of capital of the wide marshy plains of interior Finland.

Great Russia is the most extensive of all the divisions of the empire. It forms the great interior mass of what was the original Muscovy, and presents the native race and habits in their utmost purity. The northern part corresponds to Sweden and Lapland; it is hilly, and wooded; and though covered during more than half the year with snow, yet in its better tracts it produces oats, even beyond its own consumption. The middle region forms an expansive well-watered plain, abounding, though in a somewhat rough shape, with corn, cattle, timber, and all the necessaries of life.

Moscow (*fig.* 459.), the ancient and interior capital, is, perhaps, the most extraordinary city that exists, either in Europe or Asia. It presents a singular combination of whatever is most striking in both continents. It surpasses in splendour the greatest capitals of Europe, and in poverty its poorest villages. According to the happy image of the Prince de Ligne, "it looks exactly as if some 400 old castles of the nobles had been transported thither, each bringing its little attendant village of wooden cottages. Wretched hovels are blended with large palaces; cottages of one story stand next to the most superb and stately mansions; many brick structures are covered with wooden tops; some of the wooden houses are painted; others have iron doors and roofs."—"One might imagine," says Dr. Clarke, "that all the states of Europe and Asia had sent a building by way of representative to Moscow: timber huts from regions beyond the Arctic; plastered palaces from Sweden and Denmark; painted walls from the Tyrol: mosques from Constantinople; Tartar temples from Bucharia; pagodas, pavilions, and verandas from China; cabarets from Spain; dungeons, prisons, and public offices from France; architectural ruins from Rome; terraces and trellises from Naples; and warehouses from Wapping. Some parts have the appearance of a sequestered desert, and the traveller is tempted to ask, Where is Moscow? till he is told, This is Moscow." "Here are seen," according to Dr. Clarke, "wide and scattered suburbs, huts, gardens, pigsties, brick walls, churches, dunghills, palaces, timber-yards, warehouses; and a refuse, as it were, of materials sufficient to stock an empire. In other quarters the throng is so immense, that the traveller asks, What cause has convened such a multitude? and learns that it is the same every day. At some points, and particularly from the Kremlin, where all its deformed features are hidden, and the eye roves over the towers, domes, and spires of its gorgeous temples and palaces, Moscow presents an aspect of rude and varied magnificence, which scarcely any other capital can equal."

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Moscow.

The sumptuous edifices of Moscow are very numerous, as, notwithstanding the transference of the government to Petersburg, the greater number of the nobles still make it their residence. Many of their palaces are, or were, truly magnificent; that of the Pascof family, perhaps, the most strikingly so. The Kremlin (*fig.* 460), however, is the most extraordinary of all the edifices of this extraordinary city. It is a sort of enclosed town, which, besides the ancient palace of the czars, contains the two magnificent churches of St. Nicholas and the Assumption, numerous chapels, government offices, houses of the priests and other public functionaries. Its original style and pavilion-like aspect are

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The Kremlin.

decidedly Asiatic; yet there are extensive portions constructed in the Grecian style. "Here a pagoda, there an arcade. In some parts richness, and even elegance; in others barbarism and decay. It is a jumble of magnificence and ruin; old buildings repaired, and modern structures not completed; half-open vaults, and mouldering walls, and empty caves, amid white-washed brick buildings, and towers and churches with glittering, gilded, or painted domes." A Russian artist presented to Catherine a most superb model, which, at the expense of 7,000,000*l.* or 8,000,000*l.* sterling, would have harmonised the whole into one palace, the most magnificent in the world; but very small progress was made in the execution. Among the wonders of Moscow is the greatest bell (*fig.* 461.) in the world; 67 feet in circumference, weighing more than 22,000 tons, and worth about 70,000*l.*; but no intention of ever suspending it seems to be entertained. Another wonder is, the great gun, in which a man may sit upright; but from which not a shot was ever fired. The Church of St. Basil (*fig.* 462.) is, perhaps, the most curious of all the structures, from the completely Tartar style of its numerous and heavy cupolas, surmounted with gilded crucifixes. It is a work of piety for individuals to bestow large sums to gild or paint one of the numberless domes of the churches, each according to his peculiar taste; whence arises a brilliant and fantastic variety.

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Great Bell of Moscow.

The story of Moscow has been singularly eventful. She has passed through almost unparalleled vicissitudes of war and devastation; but her recent scenes of glory and calamity have surpassed all those which preceded. The burning of Moscow is well remembered as the marking event, which turned against the all-grasping usurper the tide of fortune. Napoleon, when he entered Moscow, did not find it burning. The Russians, in retiring, left merely the combustible materials deep lodged, and sure to break forth. The flames soon appeared, and, aided by strong winds from opposite quarters, gained hourly new strength, till they wrapped that vast capital in one blaze of fire. Its proud and gilded domes either fell to the ground, or stood solitary amid surrounding ruin. The city thus rendered untenable, Napoleon was forced to commence that retreat, in which a great part of his army perished. It is remarkable that the Russian government still renounce the glory of this sublime sacrifice, and represent Moscow as burned by the French. When Mr. James visited the city, in 1814. the whole space of 25 miles' circumference presented the most gloomy aspect of desolation. "A few shops and inns had been built, and looked like spots in the wide waste; but to repair the mansions of the grandees was too gigantic a work to be then even begun; and they stood in the most neglected and forlorn condition. Street after street appeared in utter ruin: disjointed columns, mutilated porticoes, broken cupolas, walls of rugged stucco, black, discoloured with the scorchings of fire, and open on every side to the weather, formed a hideous contrast with the glowing pictures which travellers had drawn of the grand and sumptuous palaces of Moscow." (*fig.* 463.) In 1823, however, Dr. Lyall and Captain Cochrane found the work of reparation far advanced; and the new streets and edifices were constructed in a more regular style, though Moscow appeared still to Captain Cochrane, as in Clarke's time, "beautiful and rich, magnificent and mean." According to a work published in 1824, at Moscow, by M. Lecointe, 6341 houses had been burned, and 8027 had been built; so that it was larger than before; and Captain Frankland, in his recent journey, confirms this observation. On the Sparrowhill, Alexander, in 1817, laid the foundation of "a Temple of our Saviour," which, if completed, will be the most gigantic structure in the universe. It is to be 770 feet high

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Church of St. Basil.

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Ruined Palaces in Moscow.

(the Great Pyramid is only 630), having three successive churches rising above each other, the lowest of which was to be fronted by a colonnade 2100 feet long. Twenty-four thousand peasants were provided, of whom 6000 were to work at the building, and the rest to till the ground for their support. The work, however, had not been seriously begun till 1824. According to Lecointe, Moscow contains 14,724 nobles, 3101 crown servants, 4383 ecclesiastics, 12,104 merchants, 28,029 citizens, 10,384 artisans, 22,194 military, 1854 manufacturers, 1882 coachmen, 53,541 domestic servants, 72,758 peasants, 19,204 persons of various denominations, 2385 foreigners: in all, 240,000.

Among the other cities, the first place, on account of its mighty name, must be given to the Great Novogorod (*fig.* 464.) Few objects convey more melancholy impressions of fallen grandeur than the view of this once proud capital of the North. First the metropolis of Rurick, it became afterwards an independent republic, which, repelling Tartar invasion, held wide sway over the regions round the Baltic, and, uniting itself to the great Hanse confederacy, gave rise to the northern proverb, "Who can resist God and the great Novogorod?" Even after Ivan had subdued it, carried off its great bell, and established his tribunal of blood, it was still the greatest town, though not the capital, of all Russia. The foundation of Petersburg gave it a more deadly blow than all its former calamities; and it is reduced to a third-rate place of 8000 or 10,000 people. Yet the crowd of domes and spires rising from its numerous churches and convents give it still a very magnificent appearance in the approach; but these, on arrival, are found standing solitary on a vast plain, while the inhabited circuit is only about a mile and a half, a great part of which is unoccupied. It is now much surpassed by Nizni (or Little) Novogorod, whose fair, already mentioned, makes it the commercial link between Europe and Asia. Its population varies, according to the season, from 15,000 to 150,000. The situation, at the junction of the Oka and the Volga (the latter here navigable for vessels of 1000 tons), is most happy for trade, but exposes it to the danger of inundation. Vladimir, once the capital of Vladimir the Great, is still a handsome little city, finely situated, and with the remains of a very magnificent cathedral. Murom, in its vicinity, is now a larger town; and in the forest which surrounds it are the extensive ironworks of Vixa. Tver is a well built, industrious city, grandly situated on the lofty banks of the Volga. In its district is Vichney Voloshok, near which is the remarkable canal connecting that river with the Baltic. In the south is Tula, already mentioned as the main seat of the iron manufacture, which has raised it rapidly to be a large, thriving, and busy place. Kaluga is also important, from its manufacture of canvas and coarse woollens, and from the fertility of the district. Orel is the capital of a very productive government, and sends great quantities of corn and other necessaries by the Oka to Petersburg. Voronetz or Voroneje, almost founded by Peter the Great, has become one of the largest and most populous towns in the empire. Situated at the junction of the river of its name with the Don, under the mild influence of a southern climate, and in a plain very fertile in corn, it carries on a very extensive trade with the Black Sea. It borders immediately on the vast southern steppes. Smolensko, on the western border of the empire, and which gained such a fatal celebrity in the late war, suffered almost as much as Moscow. Its venerable cathedral, however, presenting one of the finest specimens of Russian ecclesiastical architecture, stands on a height uninjured, though amid heaps of ruin.

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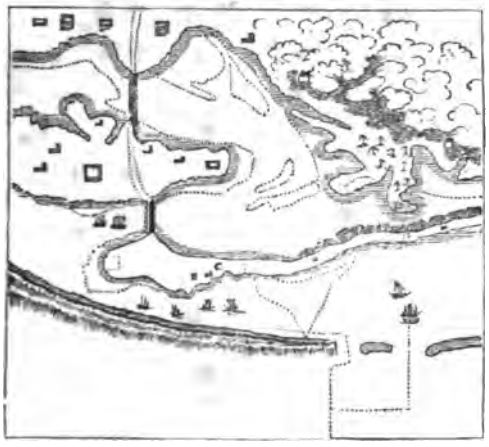

Ground plan of Novogorod.

The arctic provinces of Great Russia,—Vologda, Olonetz, and Archangel,—are in the same latitude with Scandinavia, to which they present almost an exact parallel. They are overspread with vast forests of pine and fir, which, in approaching the shores of the Northern Ocean, become stunted and disappear. The southern tracts produce considerable crops of oats, which are sent down the Dwina to Archangel, in large covered boats that never return, but are broken up for firewood. Archangel, the only Russian port before the acquisition of Petersburg and the shores of the Euxine, was then a flourishing emporium, with 30,000 inhabitants. Its merchants still provision the whole coast of the Northern Ocean, and carry on the fishery with considerable activity: about one hundred vessels, from England, Holland, and Germany, enter the port. There are several churches and public buildings, on a scale rather suited to its former greatness than to its present decline. Vologda, near

the head of the Dwina, is an industrious manufacturing place, and maintains a considerable intercourse between Petersburg and Archangel.

White or Malo-Russia, called also the Ukraine, has undergone various revolutions. It was the centre of Russia as first known to the Greeks, when Kiev, its capital, was boasted as a rival to Constantinople. It passed then through the hands of the Tartars and the Poles, till the conquering arms of Russia again reunited it, but as an appendant province. The Malo-Russians are a distinct race, decidedly superior to the Red Russians. They excel them, according to Dr. Clarke, in every thing that can exalt one class of men above another; industry, honesty, courtesy, cleanliness, neatness. Their houses are carefully whitewashed, the interior well furnished, and nicely clean. Malo-Russia is one extensive and fertile plain, not so ill cultivated as the rest of the empire, and therefore more populous. The ancient and venerable city of Kiev is majestically situated on an amphitheatre of hills overlooking the broad expanse of the Dnieper. In this situation, the numerous churches and convents of the sacred city, with their gilded domes, make even more than the usually splendid appearance of Russian cities; but when the traveller has toiled up the steep wooden paved road which leads to it, he meets with the same disappointment. Old Kiev is in a great measure deserted; though still interesting to the antiquary, as it contains the church of St. Sophia, the oldest in Russia; and, if not an exact model of the church of the same name at Constantinople, at least of Byzantine design. The new town is carefully fortified, though only with earth: but its walls and its spacious arsenal are both kept in good repair. The population is usually said to be 40,000; but neither Mr. James nor Dr. Lyall allow more than 20,000. Tchernigof and Charcof are considerable and well-built towns; the latter has an university. Pultowa is situated in one of the most productive parts of the Ukraine, and carries on a pretty good trade; but it is chiefly celebrated for the great battle in which all the brilliant fortunes of Charles XII. were wrecked, and the star of Russia became finally ascendant in the north.

Southern Russia consists of a vast expanse of level plains or steppes, extending to the south of the Black Sea, and watered by the great and broad rivers of the Dnieper, the Dniester, and the Don. These plains are chiefly covered with luxuriant pastures, and have only recently and partially felt the plough; which, however, has produced immense crops of the finest wheat, capable of rendering this region the granary of the Mediterranean. "Savage from remotest time," it was the Scythia of Darius; and all its habits and population continued to be Scythian, till Peter and Catherine infused into it the principles of civilization, which are now making rapid progress. It is even apprehended by some that this region is advancing towards a period when it will shake off the Russian yoke, and form itself into a separate kingdom. Catherinoslav, in the interior, is the nominal capital, but is only a large country town. Odessa (*fig.* 465.), on the Black Sea, is the real capital and centre of commerce for all southern Russia. This city, which has sprung up as if by magic, in the midst of a desert, was founded by Catherine, in 1796, on the site of a Tartar village of a few huts. Notwithstanding the efforts of Catherine and of Paul, it did not attain any great importance till the Turks were obliged to open the navigation of the Bosphorus, and Alexander placed it under the able administration of the Duke de Richelieu. From that time it rose rapidly, till it has become the second commercial city of Russia. It was once supposed to contain about 40,000 inhabitants, but of late it has rather declined; and Dr. Lyall believes that it does not now contain more than 30,000. It is a sort of southern Petersburg, regularly built, with handsome edifices, though on a smaller scale. It labours under the disadvantage of a want of water. In 1827, the value of the imports into Odessa was estimated at 12,500,000 rubles, and that of the exports at 18,500,000. Wheat is the great article of export; and Odessa is as famous in southern Europe for the exportation of this grain as Dantzic is in the north. During the war with Turkey, the commerce of Odessa was confined within comparatively narrow limits; but it has since become of more importance than ever. Cherson was built, in 1778, as the destined port of the Black Sea; but its unhealthy situation, and the obstructed navigation of the Dnieper, have enabled Odessa to supplant it. It is distinguished by the death of Howard the philanthropist, and a simple monument erected to his memory. Nicolaief is a neat pleasant town, and has become a considerable naval arsenal. The commerce of the Don and the eastern branch of the Black Sea is carried on by Taganrog, boldly situated on a promontory overlooking the Sea of Azof. It has the disadvantage of water so shallow that ships cannot approach nearer than ten miles; while the sea is frozen for nine months in the year. Here the Emperor Alexander died suddenly, in 1825. During the short season of commerce, the throng at Taganrog is immense; and 6000 wagons may sometimes be seen assembled in

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Odessa.

the plains behind. Azof, notwithstanding its importance during the wars of the Crimea, is only a poor village, with a small garrison.

The country of the Don Cossacks is the chief settlement of that remarkable people, who seem to have nothing Russian in their origin and nature, but to be a mixed Caucasian and Tartar race. They are well known in Europe as the most harassing light troops that ever exercised a predatory warfare in the train of any army. At home, they have excited the admiration of travellers by the arts and virtues of peace. They are handsomer and taller than the Russians, whom they surpass also in honesty and dignity. "Polished in their manners," says Dr. Clarke, "instructed in their minds, hospitable, generous, disinterested, humane, and tender to the poor; such are the natives of Tcherkaskoy. They form a sort of independent republic, paying no taxes to Russia, but cheerfully bringing forward their numerous and valuable contingent of troops. They drive a pretty brisk trade, and many of them acquire considerable wealth. A matron of Tcherkask, who walks barefooted, will, perhaps, have a casket of pearls worth some thousand rubles." The original Tcherkask (*fig.* 466.) lies on the Don, and is a sort of city floating on the water; but the unhealthiness and frequent inundation hence arising has caused the erection of New Tcherkask, in a high situation on the Alsai, a tributary of the Don; which, though less favourable for trade, has drained the old city of the bulk of its inhabitants.

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Teberkask.

The Crimea, the most southern peninsular portion of the empire, was long celebrated as the solitary link which connected the civilized world with the boundless domain of Scythian barbarism. Even prior to the time of Herodotus, the Milesians had formed trading settlements in this quarter. Under the name of the Cimmerian Bosphorus, it became attached, in a somewhat precarious manner, to the empire of Rome, which built there the important city of Theodosia. During the middle ages, the Genoese formed the flourishing settlement of Caffa, through which they obtained even the commodities of India, which were forced, by the disturbed state of Western Asia, to take the circuitous route of the Oxus and the Caspian. More recently, under the Crim Tartars, it became the seat of a monarchy of some power, ruled by a khan, though with a certain dependence upon the Porte. The overwhelming power of Russia, after a most desolating and destructive war, made a complete conquest of the Crimea. The government has since made considerable efforts to repair the ravages committed by its armies; but it has yet been unable to restore this fine country to its former prosperity. The Crimea is traversed by a range of mountains, not very lofty, but bold and picturesque, and which shelter most beautiful valleys, enjoying a mild and luxuriant climate (*fig.* 467.). It was until a recent period rich in monuments and antiquities belonging to the different nations by whom it has been occupied; but of these it is now in a great measure rifled. Sympheropol, which the Russians have made the capital, is pleasantly situated on the western coast; and, though not well built, has a very handsome cathedral. In the interior from this place is the Tartar capital of Bakitchiserai, finely situated among romantic hills, on the terraces of which the houses are built; and the palace of the khans (*fig.* 468), even in ruin, makes a magnificent object. At the opposite extremity, Caffa, once called the Crimean Constantinople, has been reduced by the Russians almost to a heap of ruins; but it is beginning to revive. One of the most remarkable features is that of the excavated rocks in the valley of Inkerman; where they appear hewn into chapels, cells, and other apartments, which astonish by their variety and intricacy. They are supposed to have been the work of fugitive Christians during the ages of persecution. The strong fortress of Perckof, commanding the narrow mouth of the peninsula, has lost its importance since the Crimea became Russian.

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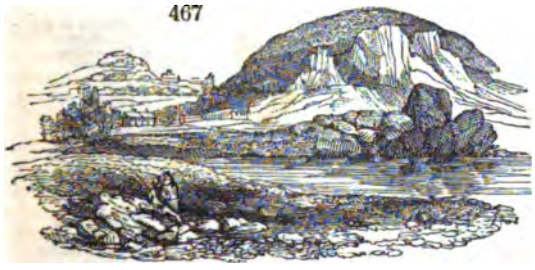

Mountain of Aden Dagh, in the Crimea.

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Palace of the Khans of the Crimea.

The kingdom of Kasan forms a semi-

Asiatic member of the empire. Down to the sixteenth century it was a Tartar kingdom, held by a branch of the posterity of Zingis; but in 1550 it yielded to the arms of Ivan. The people are still chiefly Tartars,* and more civilized than the bulk of that race; cultivating the ground with diligence, exporting corn, and bestowing still greater attention on their flocks and herds. They also tan, and even embroider leather, and make much soap. There are extensive forests of fine oak, and other trees of a superior description to those found in the north and centre of Russia. The eastern part contains great quantities of iron, copper, and other valuable minerals. The city of Kasan is reckoned the third in the empire; having 40,000 inhabitants, of whom 12,000, and the most industrious, are Tartars. The city being built and its streets paved with wood, was reduced to ashes, in 1815, by a great conflagration, which consumed the cathedral and palace, leaving only the handsome church of St. Peter and St. Paul. In the rebuilding of it, this exclusive use of wood has been discouraged. Viatka is connected with northern Russia, and sends its corn down the Dwina to Archangel. Perm is a rude wooden town; but, bordering immediately on the Urals and on Asia, it thrives by transmitting westward the rich mineral produce of that chain of mountains. Simbirsk, and Samara, on the Volga, and Penza, on its tributary the Sura, are similar wooden towns; which have considerable employment in the fisheries of that river, and in conveying by it to the capitals the plentiful produce of the surrounding countries.

CHAPTER XVII.

GREECE.

GREECE, though bearing so great a name, and occupying so high a place in our recollections, had ceased, until of late, to be considered as having any actual existence. The tor-

References to the Map of Greece.

NORTH PART.
1. Dulcigno
2. Scutari
3. Dagnio
4. Alessio
5. Merediti
6. Asteia
7. Mamesi
8. Gourasenda
9. Beba
10. Orisend
11. Kallandere
12. Katchiamik
13. Uskup, or Scopia
14. Comanova
15. Caratova
16. Guistendil
17. Djoumaka
18. Raslouk
19. Negrokor
20. Vrondou
21. Menlik
22. Petrovitch
23. Libanovo
24. Stroumnitza
25. Radovitz
26. Istip
27. Tickvech
28. Keuprili
29. Bagni
30. Critchovo
31. Istirga
32. Dibre Post
33. Dibre Sipre
34. Papigo
35. Isbat
36. Oros
37. Croja
38. Tyranna
39. Sciak
40. Cavaya
41. Durazzo
42. Pekini
43. El-Bassen
44. Petroudi
45. Berat
46. Doubrin
47. Molekha
48. Sedjim
49. Stronga
50. Bogradessi
51. Koridje
52. Ochrida
53. Presba
54. Monastir
55. Perlepe
56. Stobi
57. Demircapou
58. Gradiska
59. Moglena
60. Doiran
61. Velitza
62. Likovus
63. Neglitza
64. Seres
65. Demirhissar
66. Drama
67. Ruins of Philippi
68. Tzagiaik
69. Jenidje
70. Cavalla
71. Prahocsta
72. Contessa, or Orfano
73. Orsova
74. Betchik
75. Langaza
76. Avrethissar
77. Jenidje
78. Vodena
79. Ostrovo
80. Florina
81. Castoria
82. Bichlistas
83. Staria
84. Osouni
85. Deznitza
86. Plentza
87. Fieri
88. Carbonara
89. Clissura
90. Costrutzi
91. Fourca
92. Barmachi
93. Lexovico
94. Khionisdez
95. Bogotzico
96. Lepeni
97. Grevno
98. Siatista
99. Cailari, or Sarigeul
100. Niagostos
101. Carapheria, Veria
102. Colakia
103. Salonica
104. Sedes
105. Barzaria
106. Sidero Kaspi
107. Tchifilik
108. Fureo
109. Cassandria Gates
110. Portario
111. Panomi
112. Kitros
113. Caterin
114. Delvendos
115. Exriboudjiak
116. Cojani
117. Servia
118. Perivoli
119. Konitza
120. Mount Mertchika
121. Premiti
122. Liboovo
123. Arzyrocastro
124. Tepelem
125. Coudossi Greolen
126. Vallona
127. Mavrova
128. Doucates
129. Drimadez
130. Port Panormo
131. Kokaunes
132. Dogana.

SOUTH PART.
1. Platamona
2. Mt. Olympus
3. Vale of Tempe
4. Mt. Ossa
5. Hagia
6. Hadjibucha
7. Larissa
8. Tournovo
9. Alassona
10. Velenitcha
11. Choutzocnero
12. Mt. Ardam
13. Stagous-Kalabaki
14. Mocossi
15. Metzovo
16. Joannina
17. Calarites
18. Sarachovitza
19. Delvinaki
20. Delvino
21. Pheniki
22. Butrinto
23. Conispolis
24. Philates
25. Paramythia
26. Parga
27. Souli, or Suli
28. Letovo
29. Valentico
30. Cardiki
31. Mt. Pindus
32. Tricala
33. Spathades
34. Gurdiki
35. Serai
36. Pharsa, or Pharsalia
37. Valestina
38. Volo
39. Argalnati
40. Armyros
41. Pteleo
42. Echinou
43. Zeitouni
44. Thaumaco
45. Asmacovo
46. Pactouri
47. Arta
48. Loroux
49. Prevesa
50. Voaitza
51. Dragomestre
52. Catochi
53. Missoloughi
54. Vrachori
55. Zilichovo
56. Carpenitza
57. Petradjik
58. Lidoriki
59. Lepanto
60. Amourani
61. Galaxidi
62. Salona
63. Delphi (Castri)
64. Thermopylæ
65. Boudounitza
66. Talanta
67. Kaprena
68. Livadia
69. Aspropitia
70. Xeromais
71. Lefka
72. Thebes
73. Kokla (Platæa)
74. Groimada
75. Marathon
76. Mt. Pentelicus
77. Marcopoula
78. Port Mandri
79. Agyra
80. Athens
81. Lepsina
82. Mt. Parne
83. Megara
84. Cenchrea
85. Corinth
86. Zaraca
87. Acrata
88. Vostitza
89. Patras
90. Avia
91. Manolada
92. Gastouni
93. Coumani
94. Pyrgos
95. Port Clidi
96. Mt. Palatia
97. Lala
98. Lanzadia
99. Kalpaki
100. Tripolizza
101. Argos
102. Nemea
103. Sophico
104. Potamia
105. Castri
106. Napoli di Romania
107. Astros
108. St. Pierro
109. Coraki
110. Graditza
111. Argaliana
112. Kissava
113. Arcadia
114. Mt. Condovouno
115. Old Navarin
116. Neocastron, or Navarin
117. Modon
118. Coron
119. Petalidi
120. Androussa
121. Calamata
122. Leondari
123. Arapaulo
124. Prastos
125. Mistra
126. Sparta
127. Port Botte, or Stilo
128. Port Kari
129. Napoli di Malvasia
130. Hagio Lindi
131. Rupina
132. Kolokyna
133. Trinissa
134. Marathonisi
135. Cardamoula
136. Chimova
137. Maina
138. Quaglia.

ISLE OF NEGROPONT.
1. Hagios
2. Talanta
3. Achmet Aga
4. Castelli
5. Negropont
6. Koumi
7. Stoura
8. Carysto.

Rivers.
a Bojana
b Drin
c Mattia
d Ilisina
e Scambi, or Stobi
f Beretino, or Ergest
g Voguzza, or Aous
h Dernitzo
i Argiro
j Calmas
k Mavro-potamos
l Lourcha
m Arta
n Aspro-potamos
o Fidaris
p Asopo
q Mavro-potamos (Copais Lake)
r Helleda
s Setaldga
t. Salembria
u Nasilitza
v Indje
w Vardar
x Strymon
y Anghista
z Mesto.

Rivers in the Morea.
a Camenitza
b Gastouni
c Orphea
d Paulitza
e Cartola
f Zoumpena
g Vasilico
h Landona
i Xera.

IONIAN ISLANDS.

Cerfu.
1. Magualdes
2. Corfu
3. Santo Mattia
4. Cromo.

St. Maure.
1. St. Maura
2. Eviero.

Theaki.
1. Vathy.

Cephalonia.
1. Vilatorio
2. Samo
3. Argostoli.

Zante.
1. Anafonnitri
2. Zante
3. Chieri.

Cerigo.
1. St. Nicolo
2. Capsali
3. Modari.

*'The people here called Tartars, are a Turkish race.—AM. ED.]

Scutari
R. Drin
White Drin
Ochrida
Monastir
Castoria
Berat
R. Semeno
Durazzo
Elbasan
Tepeleni
Port Panormo
Merlera
CORFU
C Bianco
Paxo
Anti-paxo
Prevesa
Vonitza
ST. MAURA
CEPHALONIA
ZANTE
Missolonghi
Patras
Gulf of Lepanto
Corinth
Tripolitza
Napoli di Romania
GULF OF ARCADIA
Arcadia
Prodano
Old Navarin
Modon
Sapienza
Cabrera
C. Gallo
Gulf of Coron
C. Matapan
Gulf of Kolokythia
C. St. Angelo
CERIGO
Gulf of Volo
Larissa
Trikala
Zeitoun
Lepanto
Livadia
Negropont
Gulf of Salonica
C. Kili
Skyro
Thermia
Serphos
Siphanto
Kimoli
Milo
Sea of Marmora
Monte Santo
Seres
Cavalla
R. Mesta
R. Vardar
R. Karasmo R.
R. Bistritza
R. Salamvria
R. Orphera
English Miles
Longitude East from Greenwich

rent of Ottoman conquest, overwhelming all the institutions and monuments of the classic ages, seemed to have obliterated its place as a separate state, and to have sunk it into the subordinate province of a huge barbarian empire. But memorable events just elapsed have again produced the Greeks to the world, with claims to be considered as a great and independent people. Even under their deep humiliation, materials were not wanting, out of which their independence might be re-established. Amid the gloom of Turkish domination, the Greeks still existed as a people every way separate; not, indeed, manifesting their former high displays of genius and heroism, yet still remaining distinct in language, manners, and religion, and exhibiting even revived symptoms of intellectual and general activity. After witnessing the glorious though chequered efforts made by the nation itself, and though with various success; considering the part now publicly taken by the states of Europe, we can no longer hesitate to sever Greece from the Turkish empire, and give to it a place among European nations.

What is, or is not, Greece, is a question of no little difficulty.* As it consisted, even anciently, not of any single state, but of a class or confederation of states, the name was applied always under various gradations. Peloponnesus, now the Morea, with Attica, Bœotia, and the islands of the Ægean, might be regarded as the central and integral parts. Thessaly, Ætolia, and Crete, formed a sort of outer and ruder Greece, not thoroughly incorporated, yet still not belonging to the domain of the barbarian. Macedon was held as within that outer domain, till, becoming mistress of the whole country, it was at length received as one of the leading states of Greece. In modern times, the name of Greece has been given to the widest of these ranges; and as the chief local interest of its scenes consists in the comparison of what they were with what they now are, we shall, with a view more effectually to accomplish that object, adhere to this more extended view of the subject.

SECT. I.—*General Outline and Aspect.*

Continental Greece consists chiefly of a long and somewhat narrow peninsula, lying between the Adriatic and the head of the Gulf of Salonica. It shoots out, however, beyond this peninsular space, as far as the great range of the Despoto Dag, the ancient Rhodope, which bounds it on the north. Greece thus forms a space of nearly 400 miles in length, and little more than 100 in general breadth. The area, including the contiguous group of the Cyclades, has been calculated at 58,750 square miles, which is nearly the size of England. It includes on the south a smaller territory, of a form more decidedly peninsular, the Peloponnesus, now the Morea, connected with the continent only by the narrow isthmus of Corinth. In this peninsula, or immediately adjoining, were all those states which rose anciently to the greatest height of glory; and within it too those recent efforts have principally been made that have ended in its emancipation from Turkish sway.

The mountains of Greece are both lofty and very extended. On the north, it is enclosed by the snowy summits of Orbelus and Rhodope, which the early Greeks considered as the boundaries of the earth. Their height is great, though not yet fully ascertained. From this central nucleus successive chains descend southward to the Ægean, bearing the celebrated and classic names of Pindus, Olympus, Parnassus, Helicon, and Cithæron. These mountains are lofty, and present many bold features; but they are not of the first magnitude, nor do any of their peaks appear to rise higher than 6000 or 8000 feet. They are so disposed as to enclose large circular basins, which slope to a level plain of rich alluvial soil. So completely are many of these fertile tracts shut in, that they communicate with the rest of the country only by the narrow strait through which the waters force their way. They thus suggest the idea of having once formed inland lakes, whose waters, having found an outlet, are now converted into rivers. This formation singularly favoured that original division into a number of small separate states, which formed so long the principle of the Greek political system, producing such varied features and such grand effects of activity and rivalry. Peloponnesus consists of a great central table-land, the ancient Arcadia, now the seat of the Mainotes, and which on all sides slopes down to a plain on the sea-coast. The Cyclades are high and rocky. Greece, even independently of its classic monuments, displays scenery perhaps as fine as that of any other country. Though it wants the majestic mountains of Switzerland, and the luxuriant plains and brilliant skies of Italy, it combines sublimity and beauty in a happier manner, perhaps, than either. As an additional feature, the crowded Cyclades diversify its seas, combining with the opposite continent to form every variety of apparent lakes, gulfs, and bays, and exhibiting bold and striking rocks and headlands. All this is vastly heightened by the noble monuments, in the most picturesque state of ruin, which are to be found in this region.

The rivers of Greece, in consequence of its broken and insulated aspect, and of its universal proximity to the sea, seldom reach any important magnitude. The Vardar, the ancient

* [The boundary of the actual kingdom of Greece, as fixed in 1832, commences at the north-east angle of the Gulf of Arta, and passing eastward to the sources of the Sperchius, follows the line of Mt Othrys to the Gulf of Zeitoun.—AM. ED.]

Axius, descends from the chain of Rhodope into the Gulf of Salonica; and the Drino, from the same source, flows into the Adriatic; both having a course of 150 or 200 miles. But the streams which the poets have immortalised, the Cephisus, the Ilissus, and the Eurotas, even the Alpheus and the Achelous, are little more than brooks almost dry, unless when swollen by the rains.

Sect. II.—*Natural Geography.*

Subsect. 1.—*Geology.*

The Geology of this country is similar to that of Hungary

Subsect. 2.—*Botany*

The Botany of Greece is described with that of Turkey

Subsect. 3.—*Zoology.*

The native Zoology of Greece is no better understood than that of the tyrannic nation under which it so long groaned; nothing satisfactory can, therefore, be stated of its zoological features. Some cursory notes on the birds common to Britain and Greece, by Mr. Hawkins, will be found in the last edition of Pennant's British Zoology.

The entomology, judging from that of the Peloponnesus, must be highly interesting, as presenting many forms more strictly belonging to Africa. In the island of Zante, and on the plains of Elis, we find, in the spring, no less than three species of beautiful hairy beetles, of the genus *Amphicona*. One of these (*fig.* 470.), from its general resemblance, when flying, to a wasp, might be mistaken for an hymenopterous insect: it feeds on flowers, and at that time was in such prodigious numbers, that we might have captured hundreds, nay, thousands. That elegant and uncommon insect, the Panorpa Coa of Linnæus, at the same season, may be met with in plenty on all the open plains, together with several species of *Myrmelion*; one of a very large size, and not hitherto described.

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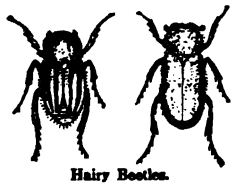

Hairy Beetles.

One of the most singular domesticated animals is the Turkish pig, more common, however, in Greece: the head of this race is short and narrow, the ears erect and pointed, the legs and body very short; the hairs are frizzled, and the colour is usually dark gray. The island of Candia is remarkable for two peculiar breeds of sheep.

The *Cretan sheep*, from the unusual character of their horns, have been, by some, considered a distinct species from the domesticated race. Their form is handsome; the horns are long, and furnished with a strong frontal ridge; those of the ram generally form a complete circle at the base, and then turn in three additional spiral twists, ascending vertically; the tail is long, and the whole body covered with coarse undulating wool. In the female the horns are divergent, straight, and twisted into four turns on their own axis. From this breed has descended the Wallachian.

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Wild Musmon Sheep.

The wild *Musmon sheep* (*fig.* 471.) is still said to be found in Candia, as well as in the highest mountains of Sardinia and Corsica. Major Smith considers that this species makes the nearest approach to the various domestic races now dispersed over Europe. The horns are rather short, and curved backwards, the points being turned inwards; the usual colour is brownish or liver-coloured gray; the throat has a tuft of long hair, and the back and flanks are marked by a dark streak; the chaffron is much arched. These animals never quit the highest ridges, where they live in small herds, headed by an old male; but occasionally unite in flocks of near 100. It is doubtful whether this species be specifically the same with the wild sheep, formerly abundant in Spain, and probably in all the high primitive mountains of temperate Europe.

The Albanian dog has been celebrated from remote antiquity. It is still a very fine and pure breed, as big as a mastiff, with very long, thick, silky fur, generally of different shades of brown; the tail is long and bushy; the legs seem more calculated for strength than excessive speed, being stouter and shorter than those of the greyhound; the head and jaws are lengthened, and the nose pointed. We suspect that the famous large black spaniels of Mount Etna and Calabria must have originated from this classic race.

Sect. III.—*Historical Geography.*

The historical ages of Greece include one of the most splendid portions of the annals of mankind, and, if treated in any detail, would far exceed our limits. We can but rapidly indicate the leading epochs. These are,—

The early or heroic ages, when the different valleys of Greece were ruled by petty princes, afterwards called tyrants. To this age belong the exploits of Hercules, Theseus, and other chiefs, exalted into demigods, for the zeal with which they redressed and punished oppressions, of which many of these petty chieftains were guilty. The Trojan war collected together the scattered portions of the Grecian people, made them known to each other, and gave a great impulse to the national mind.

The era of the freedom and glory of Greece began when the different little states threw off the yoke of their tyrants, as they now called them, and erected themselves into independent republics. The enthusiasm produced by this event was wonderfully heightened when all the armies of the East, united under the standard of the Great King, were vanquished in a series of battles the most glorious which history has ever recorded. Greece now took the lead among all the nations of the world; and in the succeeding period, though her strength was unfortunately wasted by intestine dissensions, she added to her military glory that of carrying eloquence and the arts to a perfection which has served as a model to all succeeding ages.

The conquest of Macedon subverted the liberty of Athens and Sparta, and with it all their greatness and glory. Yet Greece, as identified with Macedon, saw her conquests carried to the most distant regions; and Greek kingdoms, Greek laws, and the Greek language prevailed from Egypt to the borders of India. Even Greece itself, especially at the period of the Achæan league, threw out some brilliant sparks of her ancient flame; and letters and arts continued to be cultivated, though not with the same ardour.

The conquest by Rome terminated the political existence of Greece; yet in some respects she subdued even her conquerors. Her fame in arts and eloquence remained undiminished; and the greatest of the Romans, and all who aspired to eminence in learning, came to study in her schools. Athens continued still to be the intellectual capital of Greece, and even of the civilised world.

The conquest by the Ottomans finally extinguished in Greece every thing that remained of her ancient greatness. The Greeks were made "the slaves of slaves," and even their character became deeply tinctured with the degradation which, in such circumstances, can scarcely be avoided. The mountains, however, still afforded shelter to numerous bands, who, under brave and hardy chiefs, not only maintained a practical independence, but carried devastation into the neighbouring plains.

Attempts at emancipation were not wanting, even in the periods of the greatest depression of Greece. Supported by Venice, the Mainotes rose, in the end of the seventeenth century, and maintained the contest for several years. Another insurrection was raised in 1770, in consequence of the landing of 2000 Russians; but this was soon suppressed. In 1790, the Suliotes, roused by the same instigation, performed prodigies of valour; but being encountered by the energies of Ali Pacha, they were nearly exterminated. Lastly, in 1820 came the grand insurrection, with its strange vicissitudes, which must be fresh in the recollection of the reader. Internal dissension, worse than the foreign sword, has repeatedly brought the cause to the brink of destruction; but the treaty concluded at London between Britain, France, and Russia; with its consequences, the battle of Navarin, and the expulsion of Ibrahim Pacha, have obliged the Porte to consent to the independence of at least those portions of Greece which were most decidedly Grecian. The nomination of Otho of Bavaria to the throne, supported by the great powers with money and troops, affords the hope that the new state has now permanently obtained a tranquil and settled condition.

SECT. IV.—*Political Geography.*

Constitutional monarchy is the form of government destined for Greece by the great powers, and in which she appears to have acquiesced; and a monarch, after many difficulties, has at length been chosen. The political elements are by no means duly organised. The two parties are that of the people, composed generally of the inhabitants of the towns, and having at its head the commercial state of Hydra; and that of the capitani, or chieftains, who, in the interior of the country, have established a species of feudal military sway.

Greece, considered as a free state, has been contracted in extent, in consequence of the reverses sustained by the national arms, and the treaty concluded by the European powers; and includes only a small portion of what we have been accustomed to consider as Greece. Bounded on the north by a line from the Gulf of Volo to that of Zeitoun, the present kingdom of Greece does not comprise the extensive and populous territories of Thessaly, Macedonia, and Albania. [But the island of Eubœa; the Northern Sporades (Skiathos Scopelos, Chelidromia, and Skyros); the Cyclades; and the islands in the Gulfs of Ægina and Nauplia, belong to the Grecian state, which has an area of about 21,000 square miles.

The general divisions of the kingdom are the four provinces of Western Hellas, Eastern Hellas, the Morea, and the Isles, which are subdivided into ten nomoi, and these into eparchies. The following table gives a view of the population according to the most probable estimates.

Eastern Hellas	130,000
Western Hellas	76,000
The Morea	370,000
The Isles	176,000
	752,000

Nomoi.	*Capitals.*
Argolis and Corinth, including Hydra, Spetzia, and Poros	Napoli.
Achaia and Elis	Patras.
Messenia	Arcadia or Kyparissa.
Arcadia	Tripolizza.
Laconia	Mistra or Sparta.
Acarnania and Ætolia	Vrachori.
Locris and Phocis	Salona or Amphissa.
Attica and Bœotia, with Egina	Athens.
Eubœa (Negropont), with Northern Sporades	Chalcis.
Cyclades (Syra, Tinos, Andros, Miconos, Zea, Thermia, Serpho, Siphanto, Kimoli, Paros, Antiparos, Milo, Santorin, Anaphi, Amorgos, Naxos)	Syra. Am. Ed.]

Hydra, a little rock, never heard of during the ancient greatness of Greece, has raised itself, by its commerce, and the boldness and courage of its mariners, to be the life of the Grecian confederacy. Even in 1765, Chandler found the Hydriotes in possession of 120 vessels, having compounded with the grand signior for two purses yearly as haratsh, or tribute, and being allowed the rare and valued privilege of using bells in their churches. "They soon," says he, "discovered their native rock, which they beheld, though bare, and producing nothing, with the same partiality of affection as if it were adorned with the golden fruits, and perfumed with the aromatic gales of Scio; pointing it out, and expatiating on the liberty they possessed there." The naval exploits of the Hydriotes have been the chief bulwark and glory of Greece, in its daring contest with the Ottoman power. The government is chiefly conducted by several families; the Conduriotti, Miaulis, and Tonibage, who have amassed great wealth by commerce, They have always supported an united government, and the authority of the general congress, against the lawless sway of the capitani; but, being destitute of land forces, they have but small means of compelling the rest to accede to their views.

The capitani hold nearly all the mountainous tracts and upper valleys of Greece. Aided by their fastnesses, they either maintained an original independence, or attained a new one on the decline of the Turkish power. Many of them were at first shepherds, whence they rose to be robbers, and at last to be chiefs, somewhat similar to the heads of the Highland clans. Their adherents are not held, however, by the same deep hereditary attachment, but chiefly by hopes of pay; and when these diminish, they readily enlist into a more profitable service. Colonel Stanhope has given Stonaro as a specimen of a capitano. He held sway over 120 villages, each containing about seventy families. He himself owned in the mountains 7000 or 8000 head of cattle, and his family nearly 500,000. These were let out to herdsmen, who paid for each a certain amount in butter, cheese, and wool. In the plain, the cultivators, who are tolerably industrious, pay their rent in three parts; one to the capitano, one to the Turks, and one to the maintenance of the troops. Stonaro can command 400 regular fighting men; and, when he summons all his peasants, can produce about 3000. These chiefs have usually a fastness in the most inaccessible part of the mountains, to which they can retreat, in cases of urgent necessity; such as the cave in Mount Parnassus, where Odysseus kept his family and treasure, and held at defiance both the Turks and the hostile party among the Greeks.

The military force consists almost entirely of the bands of these capitani, called and held together through personal influence. They are altogether of the description of light troops, and form excellent mountain warriors. They make light desultory attacks; they entrench themselves in the passes and on the mountain tops behind stone walls, through which they make loopholes, and fire with great dexterity; but they studiously avoid either a pitched battle, or the storming of a fortified post. All the Greeks, according to Mr. Humphreys, love to get as much, and to fight as little, as possible. They can bear, however, astonishing hardships and privations; and all this did very well, while they had only the tumultuary assault of the Turks to contend against; but when the Pacha of Egypt brought against them troops trained somewhat according to the European model, they proved unequal to the contest, and might probably have fallen, had it not been for foreign interference. The attempts to raise a regular force, to which they have been stimulated by their European friends, have failed, partly through want of means and management, and partly from the disdain which the free soldiers who fought under the capitani entertained for the mechanical tactics to which their leaders proposed to subject them. The Morea, it is said, can muster 15,000 fighting men; but it is seldom that more than 6000 can be assembled in one army. The Greeks of the country without the Morea are reckoned braver, particularly those of the mountains of Olympus, who could collect 12,000 men, if they had the means of equipment.

The navy of Greece has attained the highest glory; yet it is of very small force and

equipment. She has not a vessel which can aspire to the rank of a frigate; and her little armed brigs do not exceed 80 tons; some have even rated them at 40. Their bold and skilful manœuvres have, in Count Pecchio's apprehension, rather frightened than beaten the enemy, and have at no period made them masters of the sea. They never were able to prevent the Turks from disembarking troops at any point, nor have they formed a regular blockade of any sea-ports in their possession.

The other parts of administration do not as yet exist in any organised state. There are scarcely any revenues except those arbitrarily levied by the capitani; and with respect to the English loans, neither principal nor interest has yet been paid. Justice, in any regular form, there is said to be none, though a tolerable police is maintained by the chiefs.

SECT. V.—*Productive Industry.*

Industry, in Greece, is only in a very secondary state, yet its products are not inconsiderable.

Agriculture is carried on with rude implements and bad cattle, and only in some quarters is irrigation practised with diligence; yet so genial are the climate and soil, that the harvests are generally more plentiful than in England. Wheat, barley, and maize are chiefly cultivated, and of each there is some surplus for exportation. Cotton, for which the demand is now so extensive, is raised to a very great extent, especially in the plains of Macedonia, and forms the chief basis of its export trade. The olive in Greece, and especially in Attica, retains its ancient celebrity; "nor has the honey of Mount Hymettus lost any part of its exquisite flavour." That species of grape called the Corinthian, which produces the finest currants, is peculiar to the Morea and the Ionian Islands, especially Zante, from which it is largely exported. Greece, however, is altogether a pastoral country; the people are skilled in the management of cattle, but much more in that of sheep and goats, which are fed in vast numbers on the sides of the hills, and on the high plains of the interior. Of these animals, however, the breed is not of any eminence, and has even degenerated.

Manufactures are in a still ruder state than agriculture; and the country is indebted to foreigners for every thing, except a few coarse and common fabrics. There are, however, some respectable manufactures of carpets, silk, network, and Turkey leather at Salonica; of the last article, with fine pottery, at Larissa; and with embroidery at Joannina. The spinning and dyeing of cotton yarn is carried on in Thessaly and Macedonia to a considerable extent.

Commerce is carried on with much greater activity than any of the other branches of industry, and has been one of the main instruments in raising this renowned country from its extreme depression. The great circuit of its coasts, its numerous bays, and its position in the vicinity of some of the richest and most productive countries in the world, clearly destined Greece to be a maritime and commercial region. The proud ignorance of the Turks, leading them to despise trade, left this career open to the vassal people. A prodigious impulse was given by the general war consequent on the French revolution, which left the Greek for a long time the only neutral flag in Europe. The islands, and particularly the little harbours of Hydra, Ipsara, and Spezzia, not only exported the produce of Greece itself, but maintained the carrying trade from port to port all around the Mediterranean. There was even an extensive transmission of articles to the head of the Gulf of Salonica, and thence by land into the heart of Austria. A Greek mercantile and shipping interest of great wealth and importance was thus created. Mr. Hobhouse, in 1809, estimated the number of her mariners at 50,000. Mr. Maclaren, in his elaborate and interesting view of Greek industry, thus reckons the exports:—Cotton, 1,200,000*l.*; tobacco, 56,000*l.*; corn, 809,700*l.*; wool, 67,000*l.*; olive oil, 100,000*l.*; currants, 40,000*l.*; silk, cheese, cattle, dyestuffs, honey, fruits, 377,000*l.*: in all, 2,649,700*l.* In speaking of the commerce of Greece, we would be understood to speak of what has been, and of what may be, but scarcely at all of what is. During the late dreadful contest it was trodden under foot; and the Hydriots, in whom it centred, had all their resources occupied by war: nor has it probably revived at all to its ancient extent.

SECT. VI.—*Civil and Social State.*

The population of Greece, an interesting question, has been calculated as yet only by the rudest estimates. The most generally followed has been that of Beaujour, who assigned to Macedonia, 700,000; Epirus, 400,000; Thessaly, 300,000; Ætolia, Phocis, and Bœotia, 200,000; the Morea, 300,000; Attica, 20,000: making in all, 1,920,000. Pouqueville, upon careful enquiry, stated the Morea at 420,000; Mr. Waddington, more recently, at 500,000; and Mr. Humphreys, who had official means of information, and does not show any great disposition to over-rate Greece, at about 600,000. Pouqueville makes the dominions of the late Ali Pacha, including Albania, Thessaly, and part of Macedonia, to contain 1,500,000. There seems little doubt that every part of Beaujour's estimate is under-rated. Mr. Maclaren, in the *Encyclopædia Britannica*, assumes 2,400,000. We should rather be inclined to 3,000,000 for continental Greece, and nearly 500,000 for the European islands, exclusive of those belonging to Asia. Mr. Humphreys reckons Hydra, Ipsara, and Spezzia at 60,000. It is an interesting question, what part of this population is Greek? Colonel Leake con-

ceives that, in continental Greece, this part does not exceed 1,000,000; but we should rather adopt Mr. Maclaren's idea, that it averages one-half of the whole population. The number, however, which has ever been actually organised or arrayed against the Turkish power probably does not exceed 1,000,000.

The character of the modern Greeks, both before and since the revolution, has been painted in somewhat unfavourable colours. They are represented as addicted to the vices incident to every despised and oppressed people; avarice, intrigue, cunning, servility, and as being almost entirely governed by motives of self-interest. The reproach, however, seems to be mainly due to the inhabitants of the towns, and the chiefs, particularly the Fanariots, or rich Greeks of Constantinople. The peasantry are allowed to be a very fine race; and, indeed, the great actions performed in the course of the late contest must silence those who pretend that the nation has lost all its ancient energies. "With all their faults," says Mr. Humphreys, "they are highly gifted; they possess a fine genius, and an acuteness in intellect, a tact, and a natural grace in manner, unequalled by any other nation." Even the capitani in their country-seats maintain a dignified and courteous hospitality, and a paternal kindness towards their retainers, resembling what is occasionally seen among the old *lairds* of Scotland. The female sex enjoy greater liberty, and are treated with much more respect, than among the Turks. They are distinguished by beauty, and by a remarkable delicacy of features and complexion. The Greeks of the cities, on the contrary, when they get rich, study to imitate the manners, and even the costumes, of the Turkish pachas, the only models of grandeur that exist within their observation. "The Greeks," says Count Pecchio, "sit *à la Turque*, and will continue to do so for a great length of time; they eat pilau *à la Turque*; they smoke with long pipes; they write with their left hand; they walk out accompanied with a long troop of armed people; they salute, they sleep, they loiter about, all *à la Turque*. Initiated into that mingled servility and insolence which despotism tends to introduce, they exhibit many examples of that moral degradation which has been hastily imputed to the Greek nation in general."

The religion of the Greeks is that which was designated by their name, to distinguish it from the Roman Catholic, after the great schism of the eastern and western churches. This, however, may be considered on a lower level as to any enlightened views of Christianity. According to a late writer, the lower ranks in Greece have a religion of mere forms, while the upper ranks have no religion at all. The most respectable of the clergy are the monks or *caloyers*, out of whom are chosen the bishops, and even the patriarch or general head of the religion, who, before the late convulsions, resided at Constantinople. Some of them are men of theological knowledge, who lead regular lives; but a violent spirit of intrigue prevails in pursuit of the dignities of the church, which are bestowed by election. The secular clergy consist of the *papas* or village priests, who, as is usual among an unenlightened people, exercise the most unbounded influence over the minds of the lower ranks. This influence, though often abused, is, perhaps, on the whole beneficial; but these papas seem to exert themselves as little as any class in infusing just views and sentiments into their parishioners. Some of them even scruple not to take the field along with the robbers, and receive a portion of the booty.

Learning, in Greece, where it once flourished with such unrivalled splendour, had fallen into a state of total extinction. With wealth and the spirit of independence, however, had arisen a strong desire to revive the ancient intellectual glory of their country, and some progress had been made. Several schools and colleges were founded, and in a flourishing state; among which that of Scio was above all conspicuous. The most distinguished young men were sent to be educated in the French and German seminaries. Greece could boast several writers of some eminence, and many of the best works of the western writers had been translated. The Turks viewed this career with jealous eyes. Two literary men, (one, the translator of Anacharsis, and the other an eminent poet, who had endeavoured to arouse in his countrymen their ancient spirit,) having been basely delivered up by Austria, were put to death. Yet the public libraries continued in a state of progressive advance, down to the period of the revolution, when they were almost all destroyed; and Greece seemed to be thrown back many steps in the career of letters. As soon, however, as the government had acquired a degree of consistence, they turned their immediate attention to this object; and, really, considering the pressure of so dreadful a war, effected wonders. They established schools of mutual instruction at Athens, Argos, Tripolizza, Missolonghi, and most of the islands. They decreed the formation at Argos of an academy on a great scale, where every requisite of intellectual culture might be united; also of central schools and libraries. All these institutions are yet only in their infancy; but there cannot be a doubt that, the independence of the Greeks being once established, one of the first results would be an extraordinary effort to raise their intellectual character as a nation.

Among the amusements of the modern Greeks, the dance seems to stand foremost. They scarcely meet without dancing; and frequently, according to ancient custom, in the open air, or the areas of their churches. Many of their dances have a classic character, and are probably of antique origin. They have a grand circular dance, one of a very intricate figure, in celebration of the vintages, and one called the *creene*, supposed to have been invented by

Theseus. Their dances are often choral, accompanied with songs; and the taste for music is very general. Foot races, wrestling, throwing the disc, undoubtedly handed down from antiquity, still maintain their place among the youth. The athletæ pursue the exercise of wrestling in a manner which appeared to Pouqueville entirely similar to that which, according to ancient writers, was practised at the Olympic games. They present themselves undressed from the waist upwards, music plays, they advance with measured steps, beating time, and animating themselves by humming certain airs. At the close of the contest, a prize is bestowed on the victor.

The dress of the Greeks is formed on the model of the Turkish, either from imitation, or from adoption of the same oriental pattern. Since the commencement of their independence, they have even made it a kind of triumph to display the green turban and other symbols which Moslem bigotry had prohibited to be worn by any infidel. In general the attire of all who can afford it is gaudy and glittering, covered with gold and silver embroidery, and with the most brilliant colours. Above all, the arms of the chiefs are profusely adorned, mounted with silver and even jewels. The simplicity which a more refined taste has introduced into the costume of the western Europeans is held by them in contempt. The Greek female walks abroad in a robe of red or blue cloth, over which is spread a thin flowing veil of muslin. At home she is, as it were, uncased; and when the traveller is admitted into the gynecæum, he finds the girl, like Thetis, treading on a soft carpet, her white and delicate feet naked; her nails tinged with red. Her trousers of fine calico hang down loosely, the lower portion embroidered with flowers. Her veil is of silk, exactly suited to the form of the body, which it covers rather than conceals. A rich zone encompasses her waist, fastened before by clasps of silver gilded. She wears bracelets of gold, and a necklace of the gold coin called zechins. Much time is spent in combing and braiding the hair.

The food of the Greeks, through the combined influence of poverty, and the long fasts enjoined by their religion, is composed in a great measure of fish, vegetables, and fruit. Caviare is the national ragout, and, like other fish dishes, is eaten seasoned with aromatic herbs. Snails dressed in garlic are also a favourite dish. Their most valued fruits are olives, melons, water-melons, and especially gourds, which Pouqueville says they prize almost like manna from heaven; but their extravagant use is suspected to be injurious to the health. The Greek pastry, combined of honey and oil, is indigestible to any stomach but that of a Greek.

SECT. VII.—*Local Geography.*

In making a local survey of Greece, we shall begin with the central districts, these being most decidedly and essentially Greece; thence proceeding to the outer region, till it passes gradually into Mahometan Turkey; and conclude with the islands.

Athens, with its territory, forms the point to which all the highest associations connected with the name of Greece are peculiarly attached. This territory, a little rocky and hilly peninsula, which has eclipsed the glory of the greatest kingdoms, is bounded by two gulfs; viz. that of Egina, which separates it from the Morea, and that of Negropont or Egripo, the ancient Eubœa, separating it from the long island so designated. On the land side it is closed by the ancient Bœôtia, now included in the same nomos. Its dimensions, about forty miles long, and twenty broad, are those of an English county of moderate size.

The city of Athens still holds its place among the principal towns of modern Greece, of which it is the capital. It no longer sways the destinies of surrounding states, nor pours forth the crowd of philosophers, poets, and heroes who illustrated its ancient state. Athens is extinct, both as a seat of dominion and a school of learning. It presents still, however, objects of the most lofty interest: for here are maintained, in wonderful preservation, the grandest existing monuments of sculpture and architecture; the works of a Phidias and an Ictinus, which raised those who planned them to the pinnacle of renown. The edifices of Rome, indeed, are more extended, more varied, the result of ampler wealth and resources; but those of Athens are in a style of purer and severer grandeur, and bear the stamp of loftier genius. So durable, as well as beautiful, are the materials of which they are composed, that they have survived all the ravages of time and barbarism; and their partial decay, in many instances, has only given to them a more solemn and affecting character. The Acropolis (*fig.* 472.), crowned with the Parthenon, forms the most conspicuous object with which Athens is adorned. It is seated on an almost precipitous hill, commanding all the surrounding country. The Parthenon, or Temple of Minerva (*fig.* 473.), was erected by Pericles during the most classic age of Athens. It was of the finest white marble, encompassed with fluted columns of the Doric order, and adorned with the sculpture of Phidias. It did not sustain any deadly injury till 1687, when

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Acropolis at Athens

the Venetians under Königsmark threw a bomb into it, demolished the roof, and much injured the whole fabric; after which, the Turks began to hew materials out of it, and to convert the interior into a mosque. It is now mouldering in all the solemnity of ruin. To Dr. Clarke the edifice appeared an eminently satisfactory proof of the decided superiority of Athenian design over any thing that Rome can boast; a masterpiece of architecture, uniting the greatness and majesty of the Egyptian or ancient Etruscan style, with all the elegant proportions, the rich ornaments, and the discriminating taste of the most splendid era of the arts. In graceful proportion, in magnificence, in costliness of materials, in splendid decoration, and in every thing that may denote the highest degree of improvement to which the Doric style ever attained, it has no equal. In all that relates to grandeur, harmony, elegance, and beauty, the Parthenon is universally acknowledged a model; even the minute details of the sculpture by which it is so highly decorated have the delicacy of a cameo. These sculptures, of which such fine specimens are now exhibited in the British Museum, rank perhaps as the very noblest examples of that art. Dr. Clarke notices, in particular, the immense frieze, on which the whole Panathenaic festival was represented in one continued basso-relievo design, originally 600 feet in length.

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Parthenon.

The multitude of grand objects in Athens is too great for our limits to allow us to enter into more than a very general enumeration. Among the foremost may be named a range of sixteen superb columns, believed to be the remains of one hundred and sixteen which belonged to the temple of Jupiter Olympius. In 1676 there were seventeen; but a few years before Chandler's visit, the pacha had, with incredible labour, levelled one to the ground, for the purpose of raising a mosque out of the materials. The others are still standing, sixty feet high, and about six feet in diameter, a splendid example of the Corinthian order, and built of the very finest marble. The Erechtheum (*fig.* 474.), though it consists of the two temples of Minerva Polias and of Pandrosus, is less extensive than the two just mentioned; but perhaps surpasses them in the extreme delicacy of its sculpture and ornaments, and is considered the finest existing specimen of the Ionic. The caryatides which support the Pandroseum are of particularly exquisite workmanship. The treatment of this beautiful edifice has been severe. The Turks made its portico a powder-magazine; and though the Greeks had passed a vote to rescue it from this dishonour, their funds have been hitherto insufficient. A dwelling-house of rough brick has been profanely erected between the caryatides, and the smoke from it has blackened some of the most delicate ornaments; but, on the whole, this beautiful monument has suffered less than could be expected from such unworthy usage. The Temple of Theseus (*fig.* 475.), a fine Doric structure, somewhat resembles the Parthenon, and is, perhaps, as to its general outline, the most entire of all the Grecian edifices. Though the sculptures are greatly injured, enough remains to attest their original excellence. They represent the exploits of Hercules and Theseus. This edifice seems to present a striking example of that freshness "which continued to bloom upon the erections of Pericles, which preserved their faces uninjured, as if they possessed a never-fading spirit, and a soul insensible to age."

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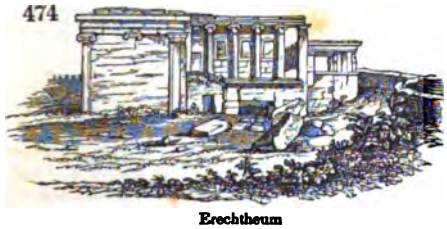

Erechtheum

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Temple of Theseus.

There are other structures of less magnitude: the Propylæa, or columnar entrance of the Acropolis; the Lantern of Demosthenes; the Choragic monument of Thrasyllus; the marble Tower of the Winds; the monument of Philopappus; which excite the admiration of the traveller. There are others of which only the site and outline can now be traced: such is the Stadium, "the most wonderful of all the marvellous works of Herodes Atticus." It is

formed by an excavated mountain, the ranges of seats occupying its lofty sides. This structure, on which quarries were exhausted, has now been stripped of its marble covering, and the area, 650 feet long, has been subjected to the plough; yet in Dr. Clarke's opinion every thing which is necessary to impress the mind with an idea of the grandeur and prodigious nature of the work survives, as if it existed in its most perfect state. The merely ornamental parts are not missed in a structure necessarily simple as to its form, but inexpressibly great and striking in its aspect; not merely from its artificial character, but from the grandeur of its appearance as a work of nature. The Odeum, built by the same opulent Athenian, roofed with cedar, and unrivalled in Greece for extent and magnificence, presents now only the inner front of the proscenium, and three rows of circular arches. Besides the edifices of Athens, there are some spots, which the visiter imbued with classic lore cannot contemplate without peculiar emotion. Among these is the Areopagus, the highest seat of judgment, and the great resort of the Athenians. The site is described by Clarke as peculiarly commanding, with a noble prospect of mountains, islands, seas, and skies; while behind rises the lofty Acropolis, crowned with all its marble temples. The visitant seeks also, but does not find, the grove of the Academy, where ancient wisdom delivered its noblest precepts. The site even can scarcely be conjectured; yet, according to Chandler, that man would still be subject to the anger of the Muses who should omit the search.

The Athens of modern times has been a city of some distinction; even before the revolution, its inhabitants, in number about 12,000 or 13,000, displayed a superior polish and intelligence; and a society called Philomusæ had been instituted for the cultivation of the arts and sciences. The Turks themselves had laid aside somewhat of their pompous barbarism. It is remarkable that, after having been formerly so distinguished as a maritime city, it had not a single ship belonging to it. It became, however, an important military position, the Greeks having found a spring of water in the Acropolis: after this discovery it was considered nearly impregnable, yet it again fell into the power of the Turks. While the ancient edifices nearly defied the ravages of war, about a third of the modern houses have been destroyed during the contest.

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Quarries of Pentelicus.

The territory of Attica is still interesting to the traveller, from the many scenes of classic celebrity which it presents. The stream of the Ilissus does not answer the expectation raised by its fame; it is only a torrent, which in the depth of winter rushes down from the mountains. Chandler, even after rains, watched in vain for a moment when its bed would be covered with water. Mount Hymettus, rich in aromatic herbs, still produces, as already observed, the honey for which it was always celebrated. The quarries of Pentelicus (*fig.* 476.), affording the materials of so many magnificent structures, exhibit vast humid caverns, over which the wide roof awfully extends, adorned with hollow tubes like isicles, while a small transparent petrifying stream trickles down the rock. On the southern frontier extends the plain of Marathon (*fig.* 477.), long and narrow, covered with rich crops of grain; but the traveller looks in vain for the columns, on which were recorded the immortal names of its heroes. The great tumulus or barrow, however, with a bush or two growing on it, still towers above the level of the plain. On the north-west extremity of Attica is Eleusis, the seat of those thrice-sacred mysteries in which almost every nation, Greek or barbarian, came in such crowds to be initiated. The mystic temple planned by Ictinus, the architect of the Parthenon, offers only broken fragments to attest its ancient place as one of the grandest edifices of Greece. Opposite to it is the island of Salamis (*fig.* 478.), or Colouri, separated from the continent by those narrow straits, the scene of that grand naval battle so glorious to Athens, which completely broke the tide of Persian invasion. Its port had been filled up, and the island was occupied merely by a handful of Albanian husbandmen, till the late convulsions,

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Tumulus at Marathon.

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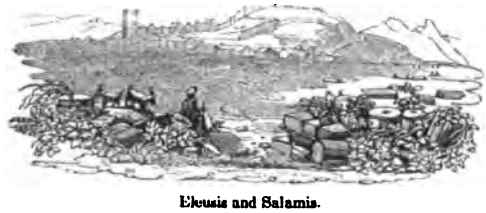

Eleusis and Salamis.

when its situation enabled it to afford shelter to crowds of fugitives from the continent, especially from Bœotia. Mr. Waddington found its population thus raised to 11,500, of whom only 192 were natives; and since that time the calamities of Athens and Ipsara have added to the number. At the opposite or southern extremity of Attica appears the temple of Minerva Sunias, a fabric of white marble, and exquisitely beautiful. It is of the Doric order, of the same style, and seemingly belonging to the same age, as the Parthenon. There are twelve columns still standing, the effect of which is greatly heightened by their position on a steep and lofty cape, whence they look down on the wide expanse of the subject deep, and are visible from afar.

Megara, the former capital of the little territory of Megaris, stands on the main route leading from Athens to the Peloponnesus. It is now a collection of mean huts, in which are found only some fragments and inscriptions on the site of its ancient edifices, overgrown with corn.

The isthmus of Corinth, four or five miles in width, unites the Morea with the continent. The ancients had built a wall across, of which some vestiges still remain. Corinth itself (*fig.* 479.) was the most conspicuous object in this part of Greece. It derived great wealth from the fertile surrounding plain, and from the large quantity of merchandise conveyed across the isthmus, to avoid the circumnavigation of the Morea, which the ancients dreaded. Preserving its ancient name, it occupies a wide area but thinly filled with houses; and, with the exception of a group of fine Doric columns, few only of those monuments remain which must have adorned it during the days of its splendour. It presents, however, a most distinguished natural object—the citadel or Acrocorinthus, which towers to the height of upwards of 1000 feet, and commands an almost matchless view over the sea and the finest regions of Greece. It is a position of great military strength, "the Gibraltar of the Peloponnesus," and was well fortified by the Venetians. But the works are considered by Mr. Blaquière as too extended, and they have not maintained that impregnable character to which their aspect seems to entitle them. The villages round Corinth, and even the port, were entirely laid waste during the late severe contest.

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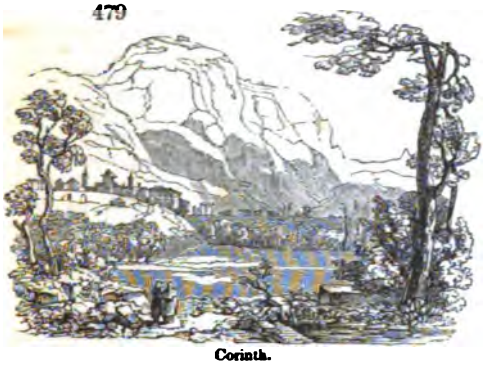

Corinth.

Sicyon, with its fine plain covered with villages, presents itself as we turn to the right into the Peloponnesus. This ancient seat of Grecian power is now dwindled from its high pre-eminence to become one of the most wretched villages in the Morea. Few traces also remain of the arts, of which this opulent and voluptuous city was considered as the school. The chief is the theatre, which remains almost entire, and appeared to Dr. Clarke to surpass every other in Greece, in the harmony of its proportions, the costliness of its workmanship, the grandeur of the Koilon, and the stupendous prospect presented.

Argolis, a more extended plain, to the left of the isthmus, forms a long peninsula parallel to that of Attica. It consists chiefly of a plain, bordered by very high mountains, and of very peculiar beauty. It is divided into delicious valleys covered by cultivated fields, or filled with myrtles, flowering shrubs, and trees, and each of which appears to be secluded from the rest of the world. The shepherds from the mountains are heard playing on their reed pipes, as in the ages of poetic fiction. The cities of Argolis are the most ancient in Greece, and their monuments bear the stamp of the Egyptian and Doric style, marked rather by stupendous magnitude than by the refinement of art. It was even believed in Greece that they were the work of a Cyclopean race of gigantic stature; a notion, as Dr. Clarke observes, which every nation has entertained respecting its ancestors.

Mycenæ, Argos, and Tiryns rank as the most memorable of these antique cities. Mycenæ, the early capital of Greece, and "the proud seat of the king of kings," still presents specimens, wonderfully entire, of the architecture and sculpture of the heroic ages. Its Acropolis, perhaps the most ancient in the world, has admirably withstood the ravages of time; and its walls, composed of huge unhewn masses of stone fitted to each other, follow the sinuosities of the rock on which it stands. The entrance is by the Gate of the Lions, the same by which "the king of men" issued forth to the conquest of Troy. It is supposed that the two sculptured lions, or rather panthers, which surmount it, were mythological figures, and that the whole edifice possessed the same sacred character which was ascribed to the Acropolis of Athens, and the temples of Egypt. Another monument consists of a tumulus of vast dimensions, which Dr. Clarke has given much reason to think was the actual tomb of Agamemnon. The entrance, built with all the colossal grandeur of Phœnician architecture, is

surmounted by a mass of breccia, twenty-seven feet long, said to be the largest slab of hewn stone in the world. All the monuments of Argolis bear an Egyptian character, and Dr. Clarke almost fancied himself again among the ruins of Memphis. Argos itself succeeded Mycenæ as capital of the plain, which place it continued to hold till the late revolution, when Napoli rivalled it. The antiquities of Argos are few, and consist only of terra-cottas and architectural fragments. Dr. Clarke discovered here one of those secret hollow passages from which the oracular responses were delivered by the unseen priest in the name of the god, the sound being heightened by the rocks so as to produce a striking effect. Argos has been, in modern times, a large straggling place, the houses rather commodious, though not well built. The new government had formed there at one time a sort of capital, particularly marked by establishments for education; but according to the most recent accounts, the war had reduced it to a state of almost total desolation; from which, however, it is beginning to revive. The ruins of Tiryns form a still more striking mass than those of Mycenæ, and carry back the mind into a still more solemn antiquity. The only structures remaining are the walls of the Acropolis, enclosing a space of 244 yards by 54. Their strength is gigantic, however, like that of Hercules, from whom they are named; being twenty-one feet to twenty-five feet thick, and forty-three feet high. As an example of human power, they have been placed in competition with the pyramids of Egypt. These walls existed before Homer, by whom they are celebrated; they have remained entire since his age, and they are likely to brave the attacks of time through a much longer period.

Nauplia, which the Venetians have Italianised into Napoli, is situated at the head of the Gulf of Argos, and possesses every requisite of a great naval capital. It stands on a long narrow promontory, surrounded by impregnable heights, which would render it, like Corinth, another Gibraltar, were it held by sure defenders. The port, though its depth has diminished, is still the best and most secure in the Morea. It has carried on in modern times a very considerable trade in the export of wine, oil, and sponges; the staples of Argolis, and of the interior Morea. After the revolution, the Greeks made it their capital and seat of government, but Athens has recently become the royal residence. Clarke reckoned it to contain only 2000 inhabitants, but 6000 had just before been carried off by the plague. The number by which it was crowded when Mr. Emerson was there appeared to be 15,000. The interior is ugly, the streets being, as described by Pausanias, narrow, dark, and dirty; nor is it distinguished by any striking ancient monuments.

Argolis contains other spots that awaken interesting recollections. Epidaurus, now Pithauri, is at present only a village, situated in a narrow, but fertile and beautiful vale. Near it, however, the Greeks held their first constituent assembly, to which they gave this classic name. A few miles from it is the grove, held sacred by the ancients as the birthplace of Æsculapius; adorned also by the temples of Diana and Venus, and some other edifices. These are now level with the ground, which is strewed with elegant fragments of the Doric and Ionic orders. The theatre is in tolerable preservation, and, though tenanted by hares, partridges, and tortoises, justifies the description of Pausanias, who characterised it as one of the most beautiful in Greece. Darnala, a small but rather thriving village, now covers the site of Trœzene, of the ancient ruins of which few fragments remain; but there are numerous churches, which, though mostly dilapidated, mark its importance during the lower ages.

The high plain of the ancient Arcadia occupies the centre of the Morea to the west of that of Argolis. This celebrated seat of the pastoral muses presents some rugged and gloomy features. It is traversed and bordered by the steep chains of Mænalus and Lycæus; it is in many parts bleak and marshy; and the cold of winter is somewhat severe. In spring and summer, however, while the lower plains are scorched by the rays of the sun, it enjoys a delicious and salutary coolness; gentle clouds collect among the mountains, and descend in fertilising showers; springs and rivulets without number, descending to form the Alpheus, irrigate the fields; the vine yields abundantly its delicious fruit, and numberless flocks still feed in its valleys and mountain sides. This country was once the chosen seat of poetry and fable. Every forest, every cavern, had its gods and its altars. The woods were inhabited by fauns, and every oak had its dryad. Diana wandered among the groves, the nymphs sported among flowers; the god of the shepherds animated every spot with his presence. Here lingered long, very long, it was said, the innocence and simple manners of the first ages, when they were banished from every other part of the globe. These fond remembrances are still not altogether belied in the more sequestered districts which continue the abode of peace, where the shepherd enjoys in tranquillity the delights of a pastoral life. The population consists here chiefly of Albanians.

Tripolizza, the Turkish capital of the Morea, is situated in the eastern part of this plain, at the foot of Mount Mænalus, and in a region which even the ancients characterised as the abode of winter. Sir W. Gell is surprised that the pacha should have fixed his seat in the only ugly spot of his dominions; a large, dirty, gloomy city, in the most uninviting country, and under the worst possible climate. The Albanians, when they over-ran the Peloponnesus, and cut off here 3000 heads in two hours, raised round it a high and strong wall, which

rendered it an important military post, and exposed it to many vicissitudes during the late contest. First, after a long siege, it was stormed by the Greeks, who incurred a deep and lasting reproach for the massacre of which they were guilty on this occasion. Afterwards it yielded to the arms of Ibrahim Pacha, and the fortifications suffered so much, that it could no longer stand half an hour's regular siege. The palace of the pacha, a vast wooden building, capable of containing 1200 men, and forming a sort of suburb to the town, has been demolished; and the same fate has been shared by most of the principal houses, which were spacious, but devoid of taste. The four large mosques contain many precious fragments and bas-reliefs, profaned by the barbarous manner in which they are inserted. The Turks have either placed them inside, or covered them over, that their eyes may not be wounded by such profane representations.

The other cities of the Arcadian plain, present few monuments of their ancient fame; these, indeed, have been demolished by the people of Tripolizza, which, though not itself ancient, has been built out of them. Sinano, a miserable collection of clay huts, covers the site of the once proud Megalopolis, which the Theban hero raised into the military capital of Peloponnesus. Only its theatre, the largest in Greece, can still be traced, its seats covered with earth and overgrown with bushes, and a few fragments of its walls facing the Helisson. Pouqueville sought in vain for Mantinæa, its eight temples, and the site of the great battle in which Epaminondas conquered and fell; but Sir W. Gell could trace, in its flat marshy site, the regular circuit of its walls, washed by the Ophis, and the line of some of its streets. Tegea is, as of old, strewn with fragments, and it is conjectured that a rich treasure of ancient sculpture might be found under ground, if it were duly sought. Orchomenos occupied a commanding situation on the flat summit of a steep hill, at the foot of which the modern village is built. There are no remarkable ruins, but some indications of them might tempt the antiquary to undertake an excavation. Cantena, a town of the lower ages, and Dimizance, where the Greeks had founded a school of some eminence, are the chief existing towns in the interior of the Morea. On the coast is Arcadia, a flourishing little port, with 4000 inhabitants; but, notwithstanding the name it bears, it is not an ancient city, nor does it present ancient monuments. Ascending the river of Arcadia, and passing the agreeable village of Sidero Castro, the traveller comes to the remains of Phigalia, once a large city, of which only the circuit of the walls is in any preservation. Near it, however, stands the temple of Apollo Epicurios (*fig.* 480.), by much the best preserved ancient edifice in the Morea, and which was even esteemed second in beauty only to that of Tegea. It is placed in one of the most romantic situations that poetry could imagine, on the ridge of a hill surrounded by old trees, and in complete solitude. The frieze representing the combats of the fabulous ages, has been removed, and deposited in the British Museum. It is curious as a relic of art, but is much eclipsed by the sculptures of the Parthenon, with which it is there confronted.

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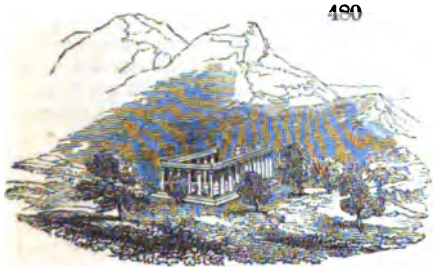

Temple of Apollo Epicurios.

The south of the Morea consists of three peninsulas, formed by the nearly parallel gulfs of Messenia or Coron, and of Kolokythia; the peninsulas of Messenia, of Maina, and of Laconia. Messenia, oppressed under the iron sway of Sparta, did not possess any important monuments till the time of Epaminondas, who emancipated it from those proud masters. It still displays a noble circuit of walls and gates, the most magnificent in all Greece. On the coast of the peninsula have risen several modern ports of consequence: Navarino, one of the best harbours in the Peloponnesus, in a fine plain, and of considerable strength, though it could not withstand the Egyptian arms; Modon, the ancient Methone; and Coron, on or near the Corone of Epaminondas; neither of which places are now of much consequence.

The peninsula of Maina is almost entirely filled with the branches of the rugged Taygetus, which rises from the sea as it were by steps, and shoots up into lofty and snowy pinnacles. Though not so elevated as those of the Alps, they are seen under a bright sky, and display, it is said, especially when viewed from the coast of Laconia, tints more beautiful than on any other European mountains. The rocks are naked, hard, and sharp; and fragments of them are often employed as hones. This rugged region is inhabited by the Mainotes; a Greek race, who, if not genuine decendants of the Spartans, have inherited at least all their hardy spirit. They have ever been the defence of the Greek nation in war, and its scourge in peace. The Mainotes, quite unlike other Greeks, have a bold and manly air, which awes even a Turk. The population is distributed through upwards of 100 villages, ruled by seven or eight capitani, who somewhat resemble the Highland *lairds* during their fullest period of clannish independence. The Mainotes have all the barbarous virtues;

the stranger who trusts to their hospitality finds it boundless, and may pass in safety from one end of Maina to the other. The women, who are uncommonly handsome, and of fair complexion, are much better treated than females are in the rest of Greece or Turkey. They are neither confined nor degraded; and, in return, they distinguish themselves by their conjugal fidelity and active household management; and, not content with the virtues of their own sex, they emulate those of the other; sallying forth at the head of warlike bands, and setting examples of masculine prowess. The weapon of the Mainotes is the rifle, to which they are trained from their infancy, and which they use with matchless dexterity. They are the very best of light mountain troops, in which capacity they have repeatedly cleared the Morea from enemies, and oppressed it themselves. The rocky southern extremity, towards Cape Tænarus or Matapan, is held by the Caconvionotes, a race who seem a sort of caricature of the Mainotes, having all their fierceness, without any of their redeeming qualities. The towns of Maina are little more than villages; of which Dolus, in the interior, containing 500 houses, is said to be the largest. Marathonisi and Kibrees are small sea-ports, the occasional residence of the beys. To the north-west opens the beautiful plain of Calamata, with the large flourishing village of that name, which, though recently destroyed, must in due time revive.

The third peninsula contains the country of Isakonia, which seems evidently a corruption of Laconia. Its north-western head receives the Eurotas, on whose banks the traveller has to seek for the remains of Lacedæmon. In approaching them his eye is struck by Misitra, or Mistra, a more modern capital, which seems to have arisen under the Greek empire. Mistra, extending by successive stages up the sides of an extensive hill, has a magnificent appearance, and might be taken for the metropolis of a large empire, rather than that of the deserted vales of Laconia. The entrance into it produces disappointment; the streets being narrow, winding, and dirty, and presenting no important edifice ancient or modern. At a few miles' distance, however, is traced the site of Sparta, covered with extensive ruins; but these, to our disappointment, are found to be not those of the austere votaries of Lycurgus; they are the "theatre (*fig.* 481.) and other gay structures erected by Rome after Sparta was reduced to subjection. Only one small building, partly of brick, might be a tomb of one of the ancient kings." Laconia is a long level woodland, from which rise, in romantic and fantastic forms, the summits of Taygetus. It has, however, one important port, Napoli di Malvasia, whence a much esteemed wine is exported, and some other trade is carried on.

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Theatre at Sparta.

The northern coast, extending along the Gulf of Lepanto, and comprehending the ancient Elis and Achaia, alone remains to complete the picture of the Morea. It is a very fertile plain, producing the best wine in Greece, and the finest currants in the world. In the classic antiquary it excites the deepest interest, as containing the sites of Elis and Olympia, or rather Pisa, the scenes of those games to which Greece thronged from her remotest valleys, and those sacred precincts, on entering which the most hostile bands deposited their arms. This region was under the protection of Jupiter Olympius, whose statue, 60 feet in height, presented the utmost perfection of painting and statuary, with every display of wealth which gifts could accumulate. What barbarian hands destroyed Olympia has not been fully ascertained, but the wreck is so complete, that travellers have passed over it, and believed that not a trace existed. Mr. Dodwell, however, was able to identify the grand temple of the Olympian Jupiter, and dug up some fragments of columns, exceeding in dimension those of the Parthenon at Athens. Elis presents only a confused wreck of scattered blocks; but near it is the modern Gastouni, a small town, one of the richest in Peloponnesus, though at this moment also lying in ruin. The modern capital, however, of all this district, is Patras; a large commercial, dirty, ill-built place, possessing but little of a classic character. It is fortified, and has been held by the Turks during nearly the whole of the present contest.

Bœotia and Phocis consist of several plains enclosed by very lofty mountains, and above all by those which are most sacred in the annals of poetry, the heights of Helicon, Cithæron, and Parnassus, accounted ever the chosen haunt of the Muses. Dr. Clarke considers their grand aspect and romantic valleys as having had a powerful influence in prompting the high flights of the Grecian muse. Thebes, in a plain surrounded by these snow-clad summits, makes still a noble appearance; but only some coins and fragments are now to be discovered within the circuit of its walls. It suffered severely in the late contest; prior to

which it was a considerable place, of from three to five hundred houses, and has been celebrated for the beauty of its females. Southward is the plain of Platæa, in which the traveller searches for monuments of the splendid victory which finally baffled the power of Xerxes. Dr. Clarke seems, in fact, to have discovered the site of the city, and near it some ancient sepulchres (*fig.* 482.), which may be supposed to have been erected immediately after that great event. On the opposite side of a ridge of hills is the plain of Leuctra, the scene of that other battle which finally subverted the dominion of Sparta over Greece. The site is still covered with huge masses of marble and stone, which the inhabitants have long laboured to demolish, with the view of introducing the plough; but the attempt has hitherto proved fruitless. Above this plain rises Helicon, the solitudes of which are in the highest degree beautiful: every declivity of the mountain is covered with luxuriant shrubs, or tenanted by browsing flocks; while the pipe of the shepherd, mingling its sound with that of the bells upon the goats and the sheep, is heard at intervals among the rocks. Dr. Clarke conceived that he could here ascertain the fountains of Aganippe and Helicon, and the Grove of the Muses. Beyond Helicon lie the plain and city of Livadia, the latter of which has been the capital of this part of Greece, and the seat of an extensive jurisdiction. It contained 1500 houses, and carried on a considerable trade in the productions of this part of Greece. Lebadia was said to be as richly adorned with sculptures as any Greek city; but every trace of them has vanished, and it is now only distinguished by the mystic spot of the cave and shrine of Trophonius, and the two streams Mnemosyne and Lethe, Memory and Oblivion, flowing through the former. A few miles westward is the plain of Cheronæa (*fig.* 483.), shut in by Parnassus, with its bleak and rugged masses of gray limestone rock, covered with shrubs and coppice. This was a great battle-plain, on which was repeatedly decided the fate of Greece; first through the defeat of the Athenians by the Bœotians, afterwards through that of the combined Greek forces by Philip, and lastly of Mithridates by Sylla. A most conspicuous tumulus still exists, a monument of the ensanguined field.

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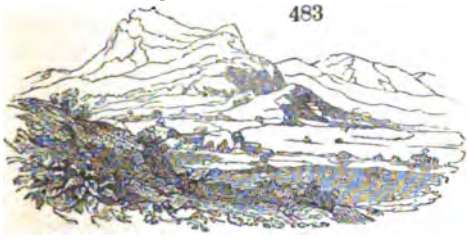
Ancient Sarcophagi at Platæa.

483



Cheronæa.

Delphi (*fig.* 484.), at the foot of Parnassus (*fig.* 485.), is separated by a branch of that mountain from the plain of Cheronæa. This was the most celebrated of the ancient shrines to which mankind went in crowds to be deluded. The temple has disappeared, and its exact site cannot be even conjectured. Its position, however, in a deep circular vale, built along the sides of Parnassus, whose vast precipices rise behind in towering majesty, cannot, independent of all recollection, be viewed without the deepest emotion. The Cyclopean masonry may still be traced, in which the streets, rising in terraces behind each other, were made to form a part of the awful features of the mountain. At the foot of a precipice, above which the rock shoots up into two pointed crags, the visiter sees the fountain of Castalia, that grand source of ancient inspiration; and the scene itself combines great picturesque beauty with all the circumstances of local interest. A square shallow basin at its foot was doubtless the Castalian fount in which the priestess was accustomed to plunge before she mounted the tripod, to pronounce the thrice-sacred oracle. The prospect from the summit of Parnassus is striking. It overlooks all the mountain tops, except Olympus, which appears with its many summits clad in shining snow.

484

Delphi.

Western Hellas, the ancient Locris, Ætolia, and Acarnania, displays neither the same

grand features of nature nor the same ancient magnificence; but it has been distinguished in modern military history. Naupactus, its ancient port, has been modernised into Lepanto, and has given its name to a gulf, which was the grand theatre of naval conflict between the Turks and the Venetians, and of that in which the Spaniards, by a signal victory, finally broke the Turkish maritime power. Salona, on the site of the ancient Amphissa, still retains considerable importance, being considered as the capital and military rendezvous of Western Greece. It communicates with the gulf by its port of Scala. Galaxidi, farther up the gulf, was rising into some importance before the late struggle. But Missolonghi, though of recent origin, has now eclipsed the fame of all the western cities. Its position at the mouth of the gulf had enabled it to rise into some commercial importance. During the late contest, its peninsular site in a shallow sea which admitted only boats, though its only defences on the land side were a low wall and a paltry ditch, inspired the Greeks with the design of converting it into a strong-hold. Missolonghi accordingly made a long and glorious resistance, and became the rallying point for all Greece without the Morea.

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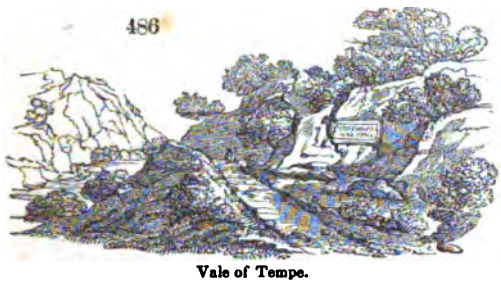
Mount Parnassus.

Thessaly forms an exterior portion of Greece, severed from the rest by the lofty and rugged barrier of Mount Œta, which runs across the entire breadth, till it locks in with the chain of Pindus. The interior consists of almost boundless plains, formerly celebrated for the manœuvres of the Thessalian cavalry. It is girdled by mountains still loftier than any yet surveyed: Olympus, the proudest of all the Grecian summits, on which fable and mythology placed the celestial mansion and the throne of Jupiter; Ossa and Pelion, next in magnitude, piled up by the giants who hoped to have scaled heaven. Thessaly is called by Dr. Clarke the Yorkshire of Greece: its rich plains are tolerably cultivated, and it is not even destitute of manufacturing industry. A late observer reckons the population at 700,000. The towns are much more Turkish than in Hellas or the Morea; but the mountains are held by Greek plunderers (klephtes), a bold and warlike race, who have made considerable efforts to establish their independence. The entrance into Thessaly from Greece is by one of the most celebrated and sacred spots consecrated by antiquity, the pass of Thermopylæ, which the patriotic devotion of "the three hundred" has stamped with the most sublime recollections. The narrow passage lies between the eastern extremity of Œta and a marsh reaching to the sea. A tumulus is here discovered, on which appear the broken remains of a massive pedestal, originally formed for supporting, as Dr. Clarke believes, the simple but affecting monument erected to their memory. A filthy quagmire, breathing mephitic exhalations, would render the scene disgusting but for these associations. After passing the considerable town of Zeitouni, where we quit the kingdom of Greece, the eye opens on the immense plain of Pharsalia, the scene of that mighty contest in which fate gave to Cæsar the empire of the world. Pharsa, or Farsala, is entirely Turkish, and nothing but the name remains to tell what it was. It is, however, a large town, with 2000 houses. This plain is separated only by some low hills from the immense champaign of Larissa, presenting a smooth and flat surface of the finest soil that can be imagined. Larissa is a large city, of 20,000 inhabitants, and presents a magnificent view, from the crowd of its mosques and minarets, which amount to no less than twenty-four. It is thoroughly Turkish, and the populace are imbued with extreme bigotry. Only broken fragments of Corinthian columns are now to be traced, many of the ancient marbles having been barbarously cut down into the forms of Turkish head-dresses, and stuck over the tombs. The shops are numerous and good; and in them may be found ancient silver medals, and also specimens of the Thessalian pottery which almost equal the ancient terracottas. Northward from Larissa tower Olympus, Pelion, and Ossa; the former disposed in vast masses, and with prodigious grandeur. The passage through this formidable chain is by the Vale of Tempe (*fig.* 486.), so celebrated among the ancients for its sequestered and picturesque character. Placed between Olympus on the left and Ossa on the right, it is compared by Dr. Clarke to Dovedale, or to the pass of Killicrankie, but on a much larger scale. The rocks rise to the most awful perpendicular height, and are tinted with a great variety of hues. At its entrance is the large village of Ampelaka, almost purely Greek, and in which flourishes a manufacture of cotton thread dyed of so beautiful a red, as to have hitherto baffled all competition.

Macedonia, beyond Tempe, opens its still vaster plain, the ancient Pieria and Emathia, having on the south Olympus with its lofty attendant summits, and on the north Scomrus, a

branch of the still longer and more awful chains of Hæmus and Rhodope. This plain resembles a crater, characteristic of the limestone formation, and has the form of a horse-shoe; being bounded on the west by Mount Pangæus, and opening on the east to the sea. The finest part is the eastern, particularly round Seres, where three hundred villages are employed in the cultivation of cotton, the staple of the country. Tobacco, distinguished by a peculiar balsamic odour, ranks second in importance. Salonica, the ancient Thessalonica, is now the greatest and most commercial city of Greece, possessing a population of 60,000 or 70,000 inhabitants. It is one of the few remaining cities that have preserved the form of the ancient fortifications, the mural turrets yet standing, and the walls that support them being entire. The city is reckoned by Mr. Walpole to contain 20,000 Jews and 12,000 Greeks. The lower part of the town, which the former inhabit, and in which business is chiefly carried on, is exposed to frequent ravages of the plague. This city has one very magnificent relic of antiquity in a propylæum, consisting of five magnificent Corinthian columns supporting an entablature. The church of St. Sophia resembles that of Constantinople upon a smaller scale, but is rendered particularly interesting by its fine columns of *verde antico*. Seres is a flourishing inland town, surrounded by the plain most productive in cotton, and supposed to contain 30,000 inhabitants. The ancient capitals of Pella and Ægæ, or Edessa, have not yet been successfully explored.



Vale of Tempe.

The islands form a prominent and interesting appendage to Greece. Cyprus, Rhodes, and a considerable number of smaller isles ranged along the coast of Asia Minor, have been always considered as Asiatic. The Greek European islands are Candia, the Cyclades, and those termed the Ionian Islands.

Candia is one of the largest islands in the Mediterranean, being reckoned about 500 miles in circumference: it is of much greater dimension east and west than north and south; and forms, as it were, a base upon which the whole Archipelago rests. It is perhaps more favoured by nature than any other part of Europe. The interior is covered with mountains, of which Mount Ida towers to a very lofty height. The plains and valleys along the sea-coast are covered with myrtle groves, spacious plane trees, and other beautiful woods; and the soil, though merely scratched by a wretched plough drawn by two sorry oxen, yields luxuriant crops of wheat and barley. The olive grows in high perfection; though the oil, for want of care and skill in preparing it, is unfit for the table, and only used for soap and other manufactures. Crete was rendered famous in early antiquity by the laws of Minos, and by institutions of a very peculiar nature founded upon them. During the classic ages it seems to have been far surpassed by the rest of Greece, and the Cretans became even proverbial for slowness of intellect. In the lower ages, it derived great lustre from the noble stand there made by Venice against the Ottoman power, at a moment when it threatened to overwhelm the whole civilized world. The siege of Candia, protracted for twenty-three years, forms one of the most memorable eras in modern history. At length the whole island fell under the Ottoman dominion, and the Turks have occupied it more completely than the Cyclades and the Asiatic islands. The inhabitants are a fine race, and more independent of the Porte than the vassals of most other parts of the empire. The mountains and mountain plains, however, have continued to be occupied by a Greek race called the Sfacciotes, who in these high tracts carry on the trade of shepherd, not altogether uncombined with that of robber. It was by this body that the chief stand was made in the late insurrection, and they had nearly driven the Turks out of the island, when they were forced themselves to yield to the Pacha of Egypt. Candia remains with the Turks.*

Of the towns, Candia, the capital, has had its harbours choked up with sand, against which the Turks never take any precautions; and the greater part of its trade has passed to Canea. It still bears the trace of a handsome Venetian town, with substantial houses formed into regular streets and squares; but the havoc of its long siege and subsequent desertion give it a very gloomy aspect. Canea, without the name of capital, is populous and flourishing, having 15,000 inhabitants; but with nothing in its aspect to distinguish it from other Turkish towns. Between Canea and Candia is Retimo, a well-built town, situated in a delightful country abounding with olive trees; but its harbour having likewise suffered, Canea has profited in this as in the former instance. Near Candia are heaps of dust and rubbish, which, with the name of Cnosson, given to a small village, indicate the ancient Cnossus, the capital of Minos and of the most powerful of the Cretan nations. There are

*[Candia has been ceded by the Sultan to the Pacha of Egypt.—Am. Ed.]

traces still more unequivocal of Gortyna; and near it a rock cut into a complex multiplicity of chambers, which has been supposed to be the famous labyrinth of Crete; but Sonnini is of opinion that is only a huge quarry.

The Cyclades, a numerous and celebrated group, are interposed between Candia and Asia Minor, but nearer to the continent, from which they recede in a south-east direction. Their aspect, bold, rocky, yet richly verdant, presents to the vessels sailing through it scenes of varied beauty. The rocks are of different and sometimes singular composition, embedding the finest marble in the world; and there are many striking indications of that interior heat which breaks forth in earthquakes and volcanoes. Their wines were celebrated in antiquity, and have not altogether lost their reputation. Among the most remarkable of these isles is Paros, whose quarries of precious statuary marble lie now neglected, not a single block having been removed since the dominion of the Turks. It is still easy to see the extreme nicety, and the care to avoid waste, with which each portion was cut out; and from the cavity left, the very destination of the block may be conjectured. The Pentelican marble was of equally original beauty, but it had not that faculty of hardening by exposure to air, and resisting decomposition through a series of ages, which caused the marble of Paros to be at last exclusively adopted in sculpture. The small contiguous island of Antiparos presents a phenomenon the most singular in the world of its kind; a prodigious grotto (*fig.* 487.), or rather series of grottoes, the roof, the floor, and the sides of which are entirely covered with a dazzling incrustation as white as snow. Columns extend from the roof to the floor, with diameters equal to that of the mast of a first-rate; and others hang in fine cubic forms above the head. The substance here exhibited was ascertained by Dr. Clark to be alabaster, the crystallisation of which has nowhere else been observed. Separated from Paros by a narrow channel is Naxos, celebrated for the worship of Bacchus, of whose statue fine sculptured fragments may still be discovered; and on a rock opposite there is a noble Doric portal of one of his temples. The wine of Naxos is still good, and is consumed in abundance; the emery stone is almost entirely obtained from this island. Delos, so celebrated in ancient mythology as the cradle of Apollo and Diana, and to whose shrines even the people of the East repaired in crowds, is now only a heap of ruins reduced to rubbish. The remains of its temples have unfortunately been resorted to as a quarry, the fragments being formed into those little turbaned pillars which serve as tombstones. Santorini (*fig.* 488.), the ancient Thera, not much noticed in antiquity, has attracted attention by some extraordinary effects of volcanic action. About a century ago, a new island was seen to arise out of the sea. It was first announced by the emission of a thick smoke, which, spreading over Santorini, destroyed vegetation, discoloured metals, and caused headach and nausea; a long succession of reports ensued, similar to those of cannon or the loudest thunder. Myriads of ignited substances rose like sky-rockets into the air, and fell down in showers of stars. Rocks and fragments were carried to the distance of two miles, and clouds of ashes to that of twenty-five miles. After this series of shocks had continued for a year, the darkness ceased, and there appeared an island five miles round, and about 200 feet at its highest point. There has since been no violent shock, though a subterraneous roaring is still heard, and smoke is seen rising from the rocks and from the sea. Milo (the ancient Melos, celebrated for its abundance) and Argentera, though not subject to such violent convulsions, exhale perpetual vapours, which were formerly employed for medicinal purposes, but have now rendered them so unhealthy, that they are almost deserted. Syra is a fertile island, the capital of which

487

Grotto of Antiparos.

488

Coast of Santorini.

489

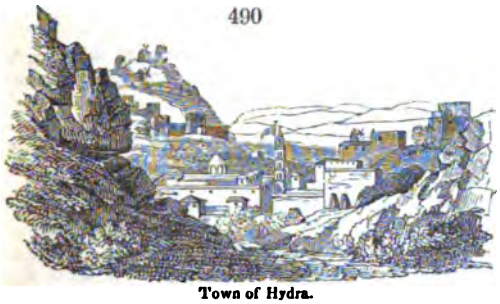
Town and Island of Syra.

is singularly arranged along the sides of a conical hill, causing it to resemble a sugar-loaf covered with houses (*fig.* 489.). Andro, and Tino, are considerable islands, susceptible of great improvement.

[Negropont or Egripo, the ancient Eubœa, is a long narrow island separated from Attica by the narrow channel of the Euripus or Egripo, from which it derives its modern name. It is diversified by rugged mountains and fertile valleys. It was supposed to contain about 60,000 inhabitants previous to the revolution, but does not probably at present contain half that number, the Turks, who were more numerous here than anywhere else in southern Greece, having been expelled the island. The capital, Chalcis, or Negropont, has a population of 10,000 or 12,000.—Am. Ed.]

Two islands, Hydra and Spetzia, though little favoured by nature, and unknown to antiquity, have, in a singular manner, taken the lead of all the states and islands of Greece. Hydra (*fig.* 490.), a rugged mass of rock, with scarcely a spot of verdure, remained without an inhabitant till Turkish oppression, and the desolations of the Morea, drove a few fishermen to build their huts on its precipitous sides. The same causes in which the settlement originated were favourable to its increase; and as it appeared too insignificant to excite jealousy, it was allowed to compound with the Turks for a moderate tribute, and began that brilliant commercial career, which was opened to it by the influence and concurrence of circumstances already mentioned. It now contains about 40,000 inhabitants, many of whom have attained to considerable wealth, and rule the republic with a sort of aristocratic sway. The energies of Hydra have been for some time exclusively turned to war, and perhaps she will never regain her former extensive commerce. Spetzia is a sort of outwork of Hydra, with only 3000 inhabitants, yet with somewhat more of cultivation. Sir W. Gell and Mr. Waddington, whose dispositions are not very friendly, represent the population of both as Albanian; but the people themselves do not own the descent; nor does it appear very probable that this fierce race, who have all along been the oppressors of Greece, should have been the foremost in seeking redress for her wrongs.

490



Town of Hydra.

Sect. VIII.—*Ionian Republic.*

The Ionian Islands is the name given to a range extending chiefly along the coast of Albania. The principal ones are Corfu (the ancient Corcyra), Santa Maura, (formerly Leucadia), Theaki (Ithaca), Cephalonia, Cerigo, celebrated under the ancient name of Cythera, but situated at a considerable distance from the others, off the southern coast of Laconia. These, as detached islands, occupied frequently a conspicuous place in ancient history; but their political union took place in modern times, in consequence of being held by the Venetians, and defended by their navy against the Turks, who had over-run the whole of the adjacent continent. When France, in 1797, seized the territory of Venice, she added these as an appendage to it; and, even after the cession of Venice to Austria, endeavoured still to retain them attached to her, under the title of the Ionian Republic. She was unable, however, to maintain them against the superior naval force of England, which, at the congress of Vienna, was nominated protector of the Ionian Islands. That power has since continued to hold them in full military occupation, and spends about 100,000*l.* a year in fortifications and troops. The natives, however, are allowed a great share in the internal government, and even assemble in a regular parliament.

[The Lord High Commissioner, who is at the head of the government, is appointed by the king of Great Britain. The legislative assembly consists of 29 elective and 11 integral members, all of the class of synclitæ or nobles; the former are chosen for the term of five years by the nobles; the latter are virtually, if not directly, nominated by the High Commissioner. The senate consists of a president, nominated by the commissioner, and five members chosen by the legislative assembly from their own number.—Am. Ed.]

These islands, like the opposite coast of Albania, are rocky, rugged, and picturesque, though none of the peaks rise to any great elevation. This surface renders them ill fitted for the cultivation of corn; but wine and fruits, especially the latter, are raised in great perfection. The species of small grapes which, when dried, are called currants, are largely exported from these islands. Zante produces annually about 60,000 cwt.; Cephalonia about 50,000. [The total annual produce is estimated at about 14,000,000 lbs. Olive oil is also largely exported, about 100,000 barrels being annually produced. Honey, wine, and flax, are the most important articles of agricultural industry. The annual value of the exports is about

$1,200,000. The public revenue, independent of the military establishment, which is supported by the British government, is $700,000 per annum.

The following table gives a general view of these islands :—

Names.	Ancient Names.	Area in Sq. Miles.	Population.	Capital.	Population.
Cephalonia	Cephalenia	500	59,839	Argostoli	4,000
Corfu	Corcyra, Phæacia	270	56,589	Corfu	17,000
Zante	Zacynthus	180	35,422	Zante	18,000
Santa Maura	Leucadia	150	18,108	Santa Maura	5,000
Cerigo (with Cerigotto)	Cythera	130	9,387	Modari	
Theaki (with Calamos)	Ithaca	60	8,550	Vathi	2,000
Paxo (with Antipaxo)	Paxos	20	4,953	St. Gago	4,000
		1310	192,848		

Zante is the richest and most flourishing of these islands, but Corfu contains the seat of government, which is strongly fortified. Argostoli, Corfu, and Zante are the principal ports.—AM. ED.]

CHAPTER XVIII.

TURKEY IN EUROPE.

TURKEY IN EUROPE forms the western and metropolitan part of that extensive and once mighty empire which subverted and superseded the eastern branch of the empire of Rome. The most extensive portion, in which perhaps its main strength is seated, belongs to Asia. In describing Greece, we have comprised much of what politically forms a portion of the

References to the Map of Turkey in Europe.

NORTH PART.

I. *Moldavia.*
1. Liptschaia
2. Britschany
3. Izvar
4. Tokoto
5. Gorodiste
6. Kichenau
7. Jouzira
8. Beltzi
9. Falcsti
10. Migischni
11. Strojeschte
12. Fultiezen
13. Nyamptz
14. Tirgu Formos
15. Jassy
16. Skouliania
17. Chiskane
18. Bender
19. Popovka
20. Ackerman
21. Kichlicki
22. Togoutchi
23. Kilia
24. Ismail
25. Tabakskaia
26. Darcesti
27. Faltsi
28. Galbina
29. Galatz
30. Tekoutch
31. Birlat
32. Wasloui
33. Boman
34. Piatra
35. Kimpa
36. Moo Skit.

II. *Wallachia.*
37. Rimnik
38. Bouzco
39. Ourzitseni
40. Ploiesti
41. Kimpma
42. Tergovist
43. Kimpolung
44. Pitesti
45. Flemunda
46. Rimnik
47. Okna
48. Tirgoschil
49. Krivelnik
50. Tchernetz
51. Gorgosch
52. Dretchen
53. Crajova
54. Urdat
55. Dobrusch
56. Slatina
57. Karakal
58. Rusvede
59. Vadulat
60. Giurgevo
61. Kopotzoni
62. Bucharest
63. Obilliesti
64. Popesti
65. Kikintz
66. Brahulov.

III. *Bulgaria.*
67. Matchin
68. Jassachi
69. Toultchi
70. Baba Dagh
71. Hirchova
72. Kara Kirman
73. Kustendjeh
74. Rassova
75. Mangali
76. Kara Agbadj
77. Gulgrad
78. Varna
79. Hadji Oglou Bazardjik
80. Silistria
81. Toutourkai
82. Tchenar
83. Pravadi
84. Choumla
85. Eski Djuma
86. Razgrad
87. Rustbuk
88. Slateritza
89. Sloilmno
90. Kabrova
91. Ternova
92. Sistova
93. Nicopoli
94. Lodcha
95. Isladi
96. Ikliman
97. Sophia
98. Karsotz
99. Berkovatz
100. Rahova, or Orehava
101. Widin
102. Pirsnik
103. Mustapha
104. Tchardah.

IV. *Servia.*
105. Taren
106. Iwarina, or Vrana
107. Ghilan
108. Pristina
109. Novo Berda
110. Vousitrin
111. Krattovo
112. Orkup
113. Nissa
114. Gorguschevatz
115. Maidanbek
116. Gladova
117. New Orsova
118. Pasarovitz
119. Keupri
120. Kragogevacz
121. Hassan Pasha
122. Semendria
123. Belgrade
124. Teestenovocz
125. Schabacz
126. Kucsilievo
127. Vallievo
128. Usitza
129. Kousnik
130. Movi Bazar.

V. *Bosnia.*
131. Sienitza
132. Tachlidjo
133. Fotcha
134. Bosna Serai
135. Traunik
136. Grutsanitza
137. Zwornik
138. Lower Tusla
139. Gradaosatch
140. Maclai
141. Prousatz
142. Brod
143. Kottor.

VI. *Croatia.*
144. Banjaluka
145. Koraratz
146. Novi
147. Bihatch
148. Ostrovicza
149. Kamenitza
150. Szokol.

VII. *Herzegovina.*
151. Glamosch
152. Livno
153. Douvno
154. Ruslghi
155. Mostar
156. Gasko
157. Gliubigne
158. Trebigne
159. Nikaki.

SOUTH PART.

VIII. *Albania.*
1. Cettigne
2. Pogoritza
3. Crouchieva
4. Ipeick, or Pechia
5. Prierend
6. Taplain
7. Tchiabak
8. Antivari
9. Scutari
10. Absuio
11. Cittanova
12. Durazzo
13. El Bassan
14. Isbat
15. Oelrida
16. Molekha
17. Berat
18. Vallona
19. Tepeleni
20. Haria
21. Preniti
22. Delvino
23. Bucintro

X. *Greece.*
83. Larissa
84. Tricala
85. Morcovo
86. Thomoko
87. Pharsa
88. Volo
89. Zeitoun
90. Vrachori
91. Loutraki
92. Missolonghi
93. Lepanto
94. Salona
95. Livadia
96. Thiva, or Thebes
97. Egripo, or Negropont
98. Athens
99. Corinth
100. Napoli di Romania
101. Argos
102. Antroni
103. Patras
104. Gastouni
105. Strobitza
106. Tripolitza
107. Leondari
108. Arcadia
109. Navarino
110. Mistra
111. Napoli di Malvasia.

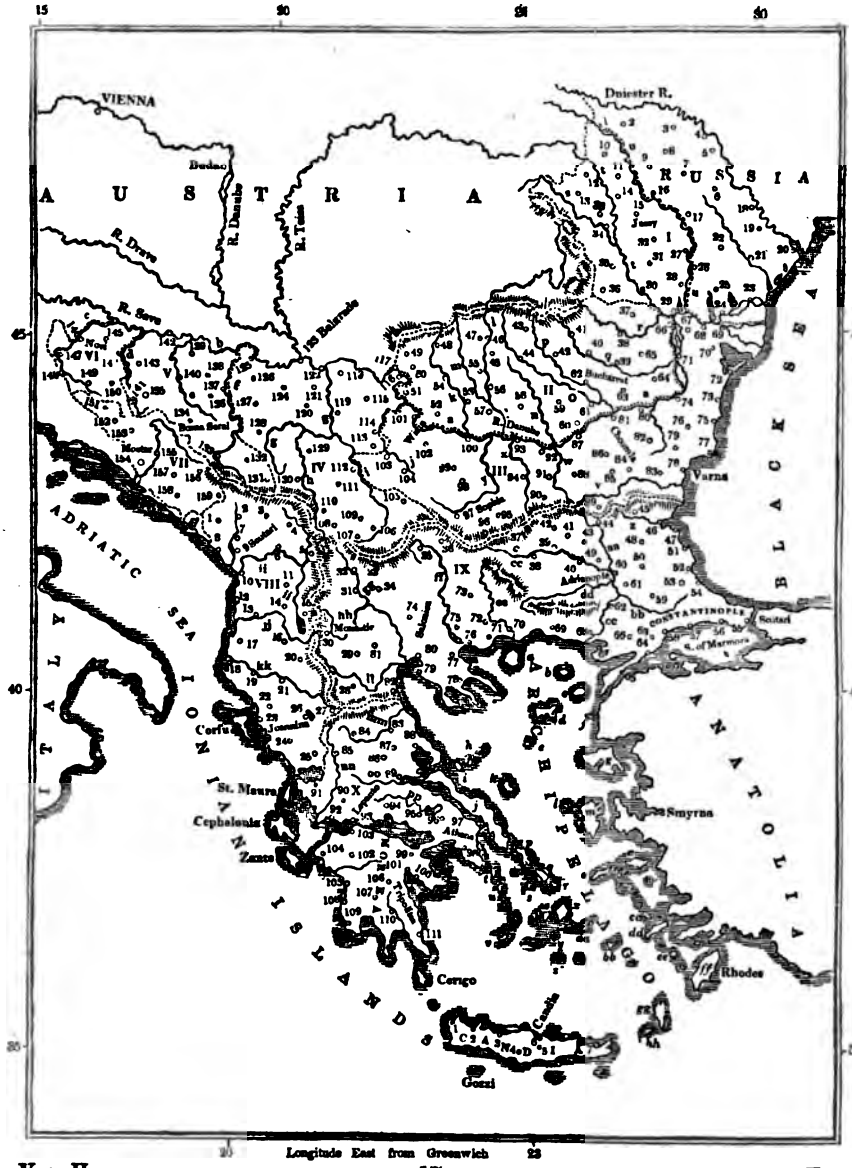
ISLAND OF CANDIA.*
1. Chimaso
2. Canea
3. Retimo
4. Trinidad
5. Temanos
6. Candia
7. Settia.

Rivers.
a Danube
b Save
c Una
d Verbas
e Bosna
f Dwina
g Morava
h Ibar
i Bulgarian Morava
j Timok
k Schyl
l Aluta
m Oltez
n Teliorman
o Ardjich, or Argis
24. Souli
25. Arta
26. Joannina
27. Mezzovo.

IX. *Roumelia.*
28. Grevno
29. Chatista
30. Monastir
31. Koprili
32. Uskup
33. Comanova
34. Istip
35. Ghiustendil
36. Doubnitza
37. Tatar Bazardjik
38. Philippopolis
39. Tchirpan
40. Hirmenli
41. Eski Saghra
42. Kezanlik
43. Jeni Saghra
44. Lamboli
45. Carnabat
46. Bourgas
47. Sizeboli
48. Silistri Oumoui Fakha
49. Tchirmen
50. Kirk Kilissa
51. Akteboli
52. Ainada
53. Visa
54. Midiah
55. Constantinople
56. Buiuk Tchekmedje
57. Erekli
58. Rodosto
59. Tchatal Bourgaz
60. Adrianople
61. Khafsa
62. Dimotika
63. Ainadjak
64. Avracha
65. Gallipoli
66. Metalgara
67. Enos
68. Feredjik
69. Kemouldjina
70. Tenglaik
71. Prabousta
72. Drama
73. Negrokop
74. Ostroumja
75. Seres
76. Orphano
77. Botchik
78. Rousiep
79. Planomi
80. Salonica
p Dambovitza
q Jalomaitza
r Bouzeo
s Bistritz
t Sereth
u Pruth
v Great Kamtchi
w Jantra
x Osma
y Iska
z Touz
aa Tonija
bb Erkene
cc Maritza
dd Hardeme, or Arda
ee Mesto
ff Strouma
gg Vardar
hh Dzerna
ii Drin
jj Scambi
kk Voujutza
ll Andje Karasvu
mm Salembria
nn Aspropotamos
oo Hellada
pp Maveo.

Islands.
a Thasos
b Semendrek, or Samothrace
c Imbros
d Lemnos
e Hagios Strati
f Tenedos
g Metelia
h Seli Dromi
i Scopelos
j Negropont
k Skyros
l Psara
m Scio
n Samos
o Nicaria
p Andros
q Tinos
r Micocos
s Syra
t Zea
u Thermia
v Milo
w Paros
x Naxos
y Nio
z Santorin
aa Amorgos
bb Stampalia
cc Calymnos
dd Stanco
ee Riscopi
ff Rhodes
gg Scarpanto
hh Coso, or Caso.

* To Egypt.


VIENNA
Budau
Dniester R.
A U S T R I A
R U S S I A
R. Danube
R. Theiss
R. Drave
R. Save
Belgrade
Bucharest
Varna
BLACK SEA
ADRIATIC SEA
IONIAN SEA
Corfu
Janina
St. Maura
Cephalonia
Zante
Smyrna
Cerigo
Rhodes
Gozzi
CONSTANTINOPLE
Scutari
Sea of Marmora
Longitude East from Greenwich

Turkish territory. There remains under the head of European Turkey a comparatively small portion of the empire; but, as it contains the capital and the seat of government, it will afford the proper occasion for taking a general survey of the power, resources, and character of the whole.

SECT. I.—*General Outline and Aspect.*

Turkey, as to site and boundaries, forms the most eastern part of the territory of southern Europe, and the link which connects that continent with Asia. It also unites the Mediterranean with the Black Sea, being almost enclosed by their various bays and branches, and by that long range of Straits, the Dardanelles, the Sea of Marmora, and the channel of Constantinople, by which these two great seas communicate. On the northern side, it has an inland boundary bordering on Austria and on Russia. The Danube forms here the limit of the central Turkish provinces, and, with the fortresses on its banks, has been the main barrier of the empire; but beyond it are the tributary provinces of Moldavia and Wallachia, which carry the frontier to the Pruth and the Carpathian mountains. The boundary on the side of Greece has been described in the account of that state.

The mountains of European Turkey consist chiefly of that extensive and formidable range called by the ancients Hæmus and Rhodope; by the Turks Balkan, Despoto Dag, Argentari; a continuous chain, stretching from the head of the Adriatic to the Black Sea. It separates Turkey into several very fine and fruitful plains; that of Roumelia in the south, and on the north those of Bulgaria, Bosnia, and Servia, ranging along the Danube. Beyond that river are the vast watery plains of Moldavia and Wallachia.

The greatest river of Europe, swelled to its utmost magnitude, rolls along the whole border of European Turkey. From the barbarism of the government, however, and the hostile relations with the neighbouring powers, the Danube serves very little for the conveyance of merchandise; it is more famed in the dreadful annals of war than in the peaceful records of commerce.

SECT. II.—*Natural Geography.*

SUBSECT. 1.—*Geology.*

The Geology of this country is similar to that of Hungary

SUBSECT. 2.—*Botany*

Turkey, inclusive of Greece. The two countries now specified can scarcely be considered separately, when treating of their botanical productions. The northern parts, however, lying in the same latitude with a great portion of Italy, and the south of Germany and Russia, though comparatively but little known, may be expected to contain a vegetation very similar to that of those countries. Greece, and the isles of the Archipelago, in a more southern latitude, under a clear sky, tempered by the waters of the Mediterranean, present a different vegetation, approaching that of Syria and Asia Minor; and our attention will be principally confined to those regions which, so renowned in history, and so admirably illustrated in their topography, are yet but imperfectly known to naturalists. The learned Tournefort, indeed, visited the islands, and Dr. Sibthorpe both the islands and the peninsula; but many of the botanical acquisitions of the former are only known by his Herbarium, and his famous drawings, called *Vélins du Muséum*, which exist in the Jardin des Plantes at Paris; while the splendid *Flora Græca* of the latter traveller, edited by the late Sir J. E. Smith, is still far from being completed; and among that portion which is published, however valuable to the man of science and the scholar, there is but little which can interest the general reader. The illustration of the writings of Dioscorides was Dr. Sibthorpe's chief object. The names and reputed virtues of several plants recorded by that ancient author, and still traditionally retained by the Athenian shepherds, served occasionally to elucidate or to confirm his synonomy. The first sketch of the *Flora Græca* comprises about 850 species. This, however, the author observes, "may be considered as containing only the plants, observed by me, in the environs of Athens, on the snowy heights of the Grecian Alp, Mount Parnassus, on the steep precipices of Delphi, the empurpled mountains of Hymettus, the Pentele, the lower hills about the Piræus, the olive-ground surrounding Athens, and the fertile plains of Bœotia." The author made a second tour in Greece; and in February, 1795, he visited the Morea. The Violet and the Primrose welcomed him in the Vales of Arcadia, and the Narcissus Tazetta, (*fig.* 492.), which Dr. Sibthorpe was inclined to think the true Narcissus of the poets, decorated in profusion the banks of the Alpheus. The barbarian hordes, under whose escort he was obliged to travel, had taste enough to collect nosegays of these flowers. The Oaks of the Arcadian mountains presented him with the true ancient misseltoe (*Loranthus europæus*) (*fig.* 493.), which still serves to make birdlime, whilst the misseltoe of Britain is, in Greece, seen only on the Silver Fir. The Jay, still called by its classical name

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Narcissus Tazetta.

Κισσα, was screaming among these Oaks, and the Water Ouzel (*Sturnus Cinctus*), flying along the rocky sides of the alpine rivulets of Arcadia, presented itself to Dr. Sibthorpe's recollection as probably the White Blackbird mentioned by Aristotle as peculiar to the neighbourhood of Mount Cyllene. But in vain did our classical traveller look for the beauty of the Arcadian shepherdesses, or listen for the pipe of the sylvan swain. Figures emaciated, and features furrowed with poverty, labour, and care, were all that he met with. Taygetus, the highest mountain in the Morea, and almost rivalling Parnassus, was ascended by Dr. Sibthorpe; but the quantity of snow, and the great distance, prevented him and his fellow-travellers from reaching the summit. Panagioti, nephew of the cheriff, and a popular character, accompanied him with fifty of his followers, and displayed his botanical knowledge by showing Dr. Sibthorpe the Darnel, still called αιρα, among the corn, which he said occasioned dizziness; and also a wonderful root, the top of which is used as an emetic, and the bottom as a purge. This proved to be the Euphorbia Apios, to which the very same properties were attributed by Dioscorides.*

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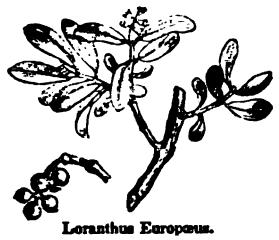

Loranthus Europæus.

Greece is very mountainous. The summits of the chain of Pindus are variously estimated at 8400 or 9000 feet. Be the height what it may, it is certain that snow remains the whole year on some of the peaks. The most southern plains are not protected from the frosts. In the Peloponnesus, near Tripolitza, the thermometer, in January, falls to 8° or 9° (Reaumur) below zero. Still, in the peninsula, snow is rare, and of short duration, except on the very elevated situations, where it lies unmelted till the return of spring. Undoubtedly there are peculiar causes that influence the climate of Tripolitza, since the Peloponnesus produces abundantly the Orange, Lemon, and even the Prickly Fig, which latter is as sensible to cold as the Date Palm. This thorny plant, which is so common in Palestine and on the Mediterranean shores of Africa, forms strong defensive hedges in the plains of Messenia. The Date does not seem to inhabit Peloponnesus; a few trees of it, which grow near Athens, are perhaps the only individuals in all continental Greece. On the eastern coast, Orange and Lemon trees grow as far inland as Bœotia, Potidæa, and Thessaly, and even to Mount Olympus, which divides Macedonia from Thessaly. This is probably the limit of those trees; at least there is nothing to attest their growth in Macedonia and Thrace, whose soil, intersected by mountains and swept by violent north winds, is mostly covered with such forests as characterise the temperate zone. Hawkins, the celebrated traveller, who visited the lovely vale of "fair Tempe," situated to the south of Mount Olympus, and who has given a list of the trees that it produces, does not mention the Orange and Lemon. They assuredly grow in the island of Lemnos in the same latitude; but Sibthorpe remarks that the climate is there too cool to ripen their fruit. The Olive succeeds on the coasts of Macedonia, 41° N.

To judge by vegetation, the western shores are warmer than the eastern. Near Epirus, between 39° and 40°, precisely in the same latitude as the Vale of Tempe, Corfu, which is celebrated for its fertility, produces both the Prickly Fig and the Date.

The vegetables peculiar to the transition zone pass from Epirus into the Illyrian provinces. The Olive and Myrtle, the Orange and Lemon, adorn the romantic rocks that skirt the mouth of the Cattaro and the coasts of the Gulf of Guarnero. The two latter do not go beyond:—the Olive, Myrtle, and Laurel, with Quercus coccifera, Ilex, and Ægilops, the Oriental Hornbeam (*Carpinus orientalis*), the Manna Ash (*Fraxinus Ornus*), the Stone Pine (*Pinus Pinea*), the Osyris alba, the Terebinth tree and Caper bush, skirt the shores so far as the extremity of the Adriatic. But this vegetation wholly ceases at a short distance from the coast, to give place to the peculiar growth of the temperate zone.

Greece exhibits but few of the larger species of the transition zone: these are found in the Mediterranean countries of Asia, Africa, and Europe. The most common and remarkable trees and shrubs, from Cape Matapan to Mount Olympus on the east, and as far as the southern frontiers of Dalmatia on the west, are, on the plains and hills, the Olive, the shrubby Jasmine (*Jasminum fruticans*), Phillyræa media and angustifolia, Styrax officinale, the Strawberry tree (*Arbutus Unedo*) and A. Andrachne, the Myrtle and Pomegranate, the Cherry Laurel, and Locust tree (*Cercis Siliquastrum*), the Pistachio (*Pistacia Lentiscus*), and *P. Terebinthus*, Zizyphus vulgaris, and Christ's thorn, Paliurus australis, Rhamnus, Alaternus, the Caper bush, Acer monspessulanum, the Sweet Bay (*Laurus nobilis*), Osyris alba, the Fig (*Ficus Carica*), Celtis australis, the White and Black Poplars and the Aspen; Populus pyramidalis and atheniensis, the Cypress and Stone Pine, the Juniper and Savin, and Juniperus macrocarpa, several species of Cistus, &c. On the banks of running waters and in damp spots are the Oriental Plane, Salix monandra and triandra, viminalis and caprœa, the White, the Weeping, and Crack Willows, the Alder, the Chaste tree (*Vitex*

* See Smith's Life of Sibthorpe, in Rees's *Cyclopædia*.

Agnus castus), and the Oleander. On the sea coast, the Pinaster and Stone Pine, Quercus, Ægilops, &c. The mountains produce Abies taxifolia, the Beech and Salix retusa (these three grow in the highest regions), the Scotch Fir, the Yew, the common Oak, Ostrya vulgaris, the Ash and Chestnut (the latter species on the spots of moderate elevation), the Hazel and Corylus Colurna, the Ash, the flat-leaved Lime (*Tilia platyphyllos*), the Horsechestnut, the Service tree and Mountain Ash, the Wild Apple and Pear trees, Pyrus Aria and torminalis, the Ilex, Quercus Ballota and Q. coccifera, these three species preferring the low valleys and plains.

The Chaste tree (*Vitex Agnus castus*), the Terebinth (*Pistacia Terebinthus*), the Shrubby Jasmine, Myrtle, Fig, Olive, Pomegranate, &c. overshadow the hills of Istria.

The Cypress, Ilex, Quercus coccifera and Ægilops, Ostrya vulgaris, the Oriental Hornbeam, Flowering Ash, Stone Pine, and Caper bush, the Rhus Cotinus, Osyris alba, Juniperus Oxycedrus and Sweet Bay, with many of the plants, both annual and perennial, that belong to the flora of the Mediterranean, grow in the environs of Fiume and Trieste.

It is remarkable that Juniperus macrocarpa, Quercus Ægilops, Corylus Colurna, Populus atheniensis, the Weeping Willow, Arbutus Andrachne, the Horsechestnut, the Wild Cherry and Cherry Laurel, the common Almond and Pomegranate, which are indigenous in Greece and Asia Minor, have never been found wild to the west of the Adriatic.

A few of the plants now enumerated, with some others peculiar to the Isles of Greece, deserve a more particular notice. Tournefort says, that, except Pinks and July-flowers, we have no fine flowers but what came originally from the Levant. Tuberoses, Hyacinths, Narcissuses, and Irises are derived from that country, and, above all, the Ranunculus and Tulip; and though these may have been natives of the Asiatic border, it is certain that most of them were introduced to our gardens through the medium of Constantinople. The latter formed so important an article of trade in northern Europe, that a single bulb has sold for a sum equal to 500 guineas. Holland now yields the best Hyacinths and Ranunculuses, rectified, as Tournefort calls it, by the culture of the industrious Dutch. The Turks have long been attached to these flowers, and it was the Vizier Kara Mustapha, who "miscarried before Vienna in 1683, that is said to have brought the latter plant (*Ranunculus asiaticus*) (*fig.* 494.) into fashion. In order to amuse his master, Mahomet IV., who extremely loved hunting, privacy, and solitude, he insensibly inspired him with a fancy for flowers; and understanding that the Ranunculuses were what he most admired, he wrote to all the bashaws throughout the empire, to send him roots and seeds of the finest sorts they could lay hands upon. The chiefs of Candia, Cyprus, Rhodes, Aleppo, Damascus, outdid all the others in thus paying their court to him. Thence came those admirable species of Ranunculus, which are to be seen in the fine gardens of Constantinople and Paris. The seeds which were sent to the vizier, and those propagated by private men, produced vast varieties. The ambassadors prided themselves on sending them to their respective masters, and in Europe they were improved by culture. M. Malaval contributed not a little thereto at Marseilles; he furnished France with them, and all foreign countries." The Anemone of our gardens (*A. hortensis*) (*fig.* 495.) abounds in the islands. In the spring, Milo, and the rest of the islands of the Archipelago are covered, says Tournefort, like a carpet, thick set, and as it were studded, with anemones of all colours: they are single, yet from their seeds come the most splendid varieties that are seen in our parterres. "But," continues the same author, "of all the rare plants growing in Milo, the prickly Pimpernel, or prickly shrubby Burnet (*Poterium spinosum*) (*fig.* 496.), was that which pleased us most: we had met with it before in Candia; but I could not persuade myself that this plant, which requires great care to raise in our gardens, could be so common in the Archipelago. It is an under-shrub, called in vulgar Greek *Stœbida:* besides the resemblance of its name, it answers in its virtues to the *Stœbe* of Dioscorides. The prickly Pimpernel is of marvellous use in these islands, towards multiplying the pasturages, and transforming, as it were, the heaths into meadows. In August, when it blows north, and the plant is dried up, they set fire to the foot of it; in an instant the wind carries the flames far and wide, even to the very mountains. The first autumn rains that fall fetch out an excellent herbage from these burnt lands, and this much sooner than in France, because it never freezes in this island, and very rarely snows." The Isle of Serpho, and a few other islands, alone produce the beautiful arborescent Pink (*Dianthus arboreus*) (*fig.* 497.), the discovery of which seems to have delighted Tournefort more than almost any other circum-

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Ranunculus Asiaticus.

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Anemone Hortensis.

stance in the whole course of his travels. He introduced it to the Royal Gardens at Paris, where it maintained its honour, he tells us, amidst an infinite number of scarce plants from the same country.

Gum Ladanum is the produce of a very handsome species of Cistus, well known in our gardens, the C. creticus (*fig.* 498.), the Ledon of Dioscorides, in whose time the gum that

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Poterium Spinosum.

497

Dianthus Arboreus.

498

Cistus Creticus.

exuded from the glands of the leaves was obtained by driving goats in among the shrubs, or by these animals naturally browsing upon them, when the substance adheres to their hair and beards. Now that this substance is collected to supply a more extended commerce, a peculiar instrument (*fig.* 499.) is employed for the purpose, which is figured and described by Tournefort, and the accuracy of which is attested by Sieber, in his *Voyage to Crete.* "It is a kind of rake, with a double row of long leathern straps. It was in the heat of the day, and not a breath of wind stirring; circumstances necessary to the gathering of Ladanum. Seven or eight country fellows, in their shirts and drawers, were brushing the plants with their whips; the straps whereof, by rubbing against the leaves of this shrub, licked up a sort of odoriferous glue, sticking on the leaves: this is part of the nutritious juice of the plant, which sweats through the texture of those leaves like a fatty dew, in shining drops, as clear as turpentine. When the whips are sufficiently laden with this grease, they take a knife and scrape it clean off the straps, and make it up into a mass or cakes of different size: this is what comes to us, under the name of *Ladanum* or *Labdanum.* A man who is diligent will gather 3 lbs. per day or more, which they sell for a crown on the spot: this sort of work is rather unpleasant than laborious, because it must be done in the sultry time of the day, and in the deadest calm; and yet the purest Ladanum cannot be obtained free from filth, because the winds of the preceding day have blown dust upon the shrubs." About 50 cwt. of it is annually collected in Crete, and sent exclusively to Constantinople.

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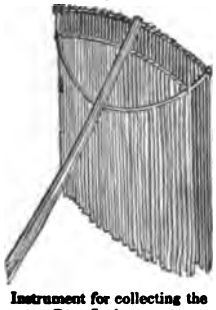

Instrument for collecting the Gum Ladanum.

Gum Tragacanth is a no less important article of trade than Gum Ladanum, and appears to be the produce, not only of the Astragalus Tragacantha (*fig.* 500.) and A. creticus (*fig.* 501),

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Astragalus Tragacantha.

501

Astragalus Creticus.

but of others of the same genus, which form a group, distinguished by their permanent leaf-stalks, which eventually become spinescent. Tournefort describes the Cretan plant, and figures a specimen, in his *Voyage to the Levant.* "We had the pleasure," says he, "of leisurely examining the Gum Tragacanth upon Mount Ida. It appears naturally in the close of June and in the following months. During that time, the nourishing juice of this plant,

thickened by the heat, bursts the greater part of the vessels that contain it. It not only accumulates in the heart of the stems and branches, but in the interstices of the fibres, which are disposed in rays. This sap coagulates in filaments, as in the pores of the bark; and these filaments, striking through the bark, gradually work their way out, as they are pushed forward by the new moisture that the roots afford. On exposure to the air, the substance becomes hardened, and forms either lumps or twisted laminæ, similar to worms of various lengths, according to the quantity of sap; it even seems that the contraction of the fibres of this plant contributes to the expression of the Gum Tragacanth. These fibres, disentangle like hemp, being pulled and trodden by the feet of shepherds and of horses, shrink up with heat, and facilitate the issuing of the extravasated juice." Sieber, however, in his Cretan voyage, tells us he could not learn that the Cretan Astragal (*Astragalus creticus*) produced any Gum Tragacanth. On Mount Lebanon, Tragacanth, we know, is yielded by the Astragalus gummifera of La Billardière, who, however, observes, contrary to the remarks of Tournefort, that it is not during the great heats of the day that this substance flows, but during the night, and a little after sunrise; and he even thinks that a cloudy atmosphere, or a heavy dew, is necessary for its production; and states that the shepherds of Lebanon only go in search of this substance when the mountain has been covered during the night with thick clouds.

502

Juniperus Lycia.

Those kinds of wood which we consider among the most precious are burnt by the Greeks for fuel. In Amorgos they consume nothing but Mastich and the Cypress-leaved Cedar (*Juniperus lycia*) (*fig.* 502.) which produces Olibanum. The Greeks make use of this latter in their fishing excursions. At the stern of the galley they have a sort of grating, into which the wood is put, broken into small pieces. In the night it is set fire to; and while the fish are following the boat, attracted by the light, they strike at them with a trident or three-forked javelin. This wood is not, however, the produce of Amorgos, which is destitute of trees, but is brought from the adjoining island. In the town of Crete, you may see bundles of wood for firing of the most fragrant description. "Nothing is used," says Sieber, "but Sage, Thyme, Cistus, Cypress wood (*fig.* 503.), Marjoram, and Lavender; and it is, indeed, a delightful country, where not only the air is scented with the balsamic odour of the numerous aromatic plants, especially after a shower of rain, but where the very smoke is perfumed with the fragrance of the wood of which their fires are made."

503

Cupressus Sempervirens.

The Mastich and Terebinth are gum-resins, for which the island of Scio is especially celebrated. The former is the product of the Pistacia Lentiscus (*fig.* 504). Olivier says that "Mastich must be considered as one of the most important and valuable productions of the island, since the inhabitants of Scio owe to it a part of their privileges, and the cultivators much of their independence and comfort. The Lentiscus which yields it no way differs from that which grows in the south of Europe and all the islands of the Archipelago, but from which no Mastich can be procured. Some slight varieties may be seen at Scio, with leaves of a greater or less size, which are owing to culture, and perpetuated by grafts and layers.

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Pistacia Lentiscus.

"In order to obtain the Mastich, it is customary to make slight and numerous incisions in the trunk and principal branches, from the 15th to the 20th of July, according to the Greek calendar. From these clefts a liquid juice insensibly trickles, which hardens by degrees, and remains attached to the tree in drops of greater or less size, and sometimes even falls on the ground. The first is the most esteemed, and is removed with a sharp iron instrument, half an inch broad at the extremity. Frequently a cloth is spread beneath the tree, that the Mastich may not be impregnated with dust and dirt. According to regulations made on the subject, the first gathering cannot take place before the 27th of August. It lasts eight consecutive days, and fresh incisions are made up to the 25th of September, when a new harvest takes place, which again occupies eight days. After that period the trees are

not cut again; but until the 19th of November, the Mastich that continues to flow is collected on the Monday and Tuesday of every week; and it is forbidden after that period to gather any.

"A curious experiment, which deserves to be generally known, came to my hearing. As it is forbidden to cultivate the Lentiscus beyond the limits prescribed by government, a Turk, hoping to evade the law, and still obtain the Mastich, grafted some Lentisk plants on young Terebinths. They took perfectly well, but the man was surprised, some years after, to find that from the incision he had made, a substance exuded, which combined the odour and qualities of Mastich with the fluidity of Terebinth. Mastich is collected in twenty-one villages, situated to the south of the town; and the quantity amounts, on an average, to rather more than 125,000 lbs. 45,000 lbs. belong to the Aga, who farms the article; and they are paid to him by the cultivators as a tax for the permission of growing it. The surplus brings them in about 50 paras for 2½ lbs. (rather less than a shilling), and they are forbidden, under heavy penalties, to sell it to any one but the contractor. The best and finest quality is sent to Constantinople, for the use of the grand signior's palace. The second sort goes to Cairo, and passes into the harams of the Mamelukes; while merchants only obtain a mixture of the second and third qualities."

It is hardly possible that the quantity of Mastich afforded by the island of Scio can supply the great consumption of this article in Turkey and Europe. A traveller, indeed, assured Olivier that the Lentiscus is cultivated in the interior of Natolia. Throughout the Ottoman empire, it is an universal practice for all the women, even the Franks, to chew Mastich almost incessantly. It softens in the mouth, to which it imparts an agreeable fragrance, while it strengthens the gums and whitens the teeth. It is also used for fumigation and perfumes; as a remedy for various diseases, and to give a pleasant flavour to bread.

The Terebinth flows naturally in summer from clefts in the bark of another species of Pistacia, the P. Terebinthus (*fig.* 505.). It is at first liquid, and of a bluish, greenish, or yellowish white; but soon becomes hard and dry on exposure to the air. It is commonly called Scian Terebinth, being principally grown in that island. But its flow is facilitated by the incisions which the natives make, every spring, in the trunk and branches of the tree. Every morning, after the coolness of night has condensed it, this substance is collected with a spatula, from the trunks of the trees, and the flat stones that are laid expressly to receive it. As the gum, thus obtained, is always mixed with some extraneous matter, it is purified by being run through small baskets, after having been liquefied by exposure to the sun.

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Pistacia Terebinthus.

The Terebinth trees afford but little gum in proportion to their size; for an individual 60 years old, and with a trunk four or five feet in circumference, yields but ten or eleven ounces annually. As a natural consequence, the Terebinth is very expensive, even in the country where it is produced. Part is consumed in the Levant, and the rest carried to Venice, where it is generally adulterated with turpentine, called Venetian Terebinth. Thus the true terebinth of Scio is hardly ever to be obtained pure: that which is really so may be known by its thickness, and by possessing a more agreeable odour than the turpentine of the spruce and other fir trees; it is also destitute of bitterness and acridity.

A species of Cynips, which deposits its eggs on the branches of the terebinth, occasions galls and large excrescences, containing a small portion of a very limpid and odoriferous resin.

The Ferula of the ancients, the νάρθηξ of Dioscorides, is an umbelliferous plant, allied to the Assafœtida, which is equally one of the Fennels, and referred by most authors to the F. communis; while Tournefort, who describes it in the island of Skinosa, where it is still called Nartheca, says:—"It bears a stalk five feet high, three inches thick: at every ten inches there is a knot, branched at each knot, covered with a hard bark two lines thick: the hollow of this stalk is full of white marrow, which, being well dried, takes fire like a match: this fire holds a good while, and consumes the marrow very gently, without damaging the bark, which makes them use this plant in carrying from one place to another: our sailors laid in a good store of it. This custom is of the greatest antiquity, and may help to explain a passage in Hesiod, who, speaking of the fire that Prometheus stole from heaven, says that he brought it in a ferula. The foundation of this fable doubtless proceeds from Prometheus being the inventor of the steel that strikes fire from the flint. In all probability Prometheus made use of the pith of the ferula instead of a match, and taught men how to preserve fire in the stalks of this plant. The stem is strong enough to be leaned upon, but too light to hurt in striking; and, therefore, Bacchus, one of the greatest legislators of antiquity, wisely ordained the first men that drank wine to make use of this plant, because, being heated with

excessive drinking, they would often break one another's heads with the ordinary canes. The priests of the same deity supported themselves on these stalks when they walked; and Pliny observes that this plant is greedily eaten by asses, though to other beasts of burthen it is rank poison. We could not try the truth of this observation, there being nothing but sheep and goats on the island. The plant is now used for making low stools: they take the dried stalks, and by placing them alternately in length and breadth, they form them into cubes, fastened at the four corners with pegs of wood. These cubes are the visiting-stools of the ladies of Amorgos. What a different use is this from that the ancients put the ferula to! Plutarch and Strabo take notice that Alexander kept Homer's works enclosed in a casket of ferula, on account of its lightness: the body of the casket was made of this plant, and then covered with some rich stuff or skin, set off with ribs of gold, and adorned with pearls and precious stones."

Many of the islands are celebrated for their wine. Samos was chiefly famed for its Muscadine, notwithstanding that Strabo was ravished with every individual thing in it, *except the wine;* but "belike," says Tournefort, "he never tasted the Muscadine wine; or, perhaps, they never bethought themselves then of making any." Naxos had two fables related of it, that the women are brought to bed at the end of eight months, and that there flows a spring of wine in the island. The wines of Greece are in common use throughout Italy. They have been celebrated, indeed, from the remotest antiquity. The ancient medals represented garlands of ivy, interwoven with bunches of grapes. The wines, according to Tournefort, have just tartness enough to qualify their lusciousness; and the lusciousness, far from being fulsome, is attended with that delicious balm, which, in those who have tasted the Candian wines, begets a contempt for all other wines whatever. Jupiter never drank any other nectar when he reigned king of this island. The Turks cannot forbear this tempting juice, at least in the night-time, and then they make clear work. The Greeks drink it night and day, without water, and in small draughts, happy that they can thus bury the remembrance of their misery. When water is poured on these wines, the glass looks as if it were full of clouds, shot through with fluctuating curling threads, occasioned by the great quantity of ethereal oil which predominates in this delicious liquid.

Malmsey, or Malvoise, so called from the village of Malwisi in that island, was for a long time the produce of Crete; and it was such a favourite with the Italians, that they have a proverb, signifying that it is "manna to the mouth, and balsam to the brain." Sieber witnessed the process of making it in Crete, and describes the annual benediction of the wine, when it is lodged in the spacious cellars of the monastery of Arcadi:*—"Lord God! thou who lovest mankind, direct thine eyes to this wine, and on those who shall drink it: bless our vessels, thrice blessed, as the wells of Jacob and the pool of Siloam, and as thou hast blessed this drink of the Apostles. O Lord, thou who wast present at the wedding of Cana, and by changing the water into wine, revealed thy glory to thy disciples, send now thy Holy Spirit on this wine, and bless it in thy name!"

The botanist need not be told that the *currants* of commerce are the produce of a species of vine; though among the unskilled in natural history an opinion prevails that they are garden currants in a dried state. They are, in fact, small grapes, the berries of a vine; but it is to be lamented that of what species authors are not agreed. They derive their name from having been first brought from Corinth; and as they are seedless, Linnæus considered them a variety of the common Vine (*Vitis vinifera*), and called it β *Corinthiaca apyrena*. Dr. Sibthorpe brought a living plant, supposed to be of this kind, from the ruins of Corinth, with no small trouble and care; but his ignorant gardener threw it away. Sir James E. Smith doubts whether the "*Zante Currant*," which is cultivated at Kew and in some other curious gardens, and is a native of that island, pre-eminently styled, for its beauty, "*Zante*, fior di Levante," be the same plant as yields the currants of commerce.

SUBJECT. 3.—*Zoology.*

The native zoology of Turkey is unquestionably less known than that of many far distant regions, inhabited by savages or barbarians. The baneful spirit of Mahometanism, shown in the besotted ignorance of its followers, who even pride themselves on their contempt for knowledge, is the curse of every nation which has been condemned to bend beneath its galling yoke. No part of Europe is more calculated to interest the philosophic zoologist than the provinces of European Turkey, and no part has been so completely unexplored. Our ideas, therefore, of its native zoology can only be formed from analogy. Situated in the most genial climate, abounding in lofty chains of mountains, rich and majestic forests, fruitful plains, and noble rivers, with its shores bathed by the Mediterranean Sea, we may conjecture that many animals now rarely seen in more populous and civilized countries here enjoy their native range; and others may probably exist, still unknown to science. The proximity, also, of Western and Minor Asia, and the lofty chain of Caucasus, that cradle of the human race, renders it highly probable that European Turkey is that "border country" where the two great zoological provinces of Europe and Asia meet, and blend.

* Built on the site of the ruins of Arcadia.

Among the birds are found several of those wading species, more common to the warm shores of Africa. That singular bird, the European or Pink-coloured Flamingo, is a frequent visiter to the salt-water pools and marshes, accompanied by the Pelican (*fig.* 506.) and many other waterfowl; and the stork builds unmolested on the magnificent ruins of the ancient temples.

The domesticated animals are better known. The horses, originally brought from the neighbouring shores of Egypt and Arabia, and still replenished by constant intercourse with

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Pelican.

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Wallachian Sheep.

those countries, are naturally fine. The cattle are very large, furnished with ample horns, and are apparently of the same breed as those of southern Italy. The Wallachian sheep (*fig.* 507.) have long been celebrated for the singularity of their horns: they diverge almost at right angles from the head, are very long, and are spirally twisted: this breed, which is white, is derived from the Cretan, and in form resembles the old unimproved breed of England; but the wool, though curling, is rather coarse, and it is straight on the thighs and tail. The superstition of the Turks leads them to abhor pigs. The Turkish greyhound, though well formed, is a disgusting little animal, from the skin being almost destitute of hair.

Sect. III.—*Historical Geography.*

The Turks, or Toorks, are a numerous race, whose original seat was in the high central regions of Tartary, to the north and east of the Jaxartes, and along the border of the Altaï. Their large and handsome persons, and their fair and ruddy complexions, distinguish them from the meagre, diminutive, and almost deformed aspect of the Mongols, the other ruling Tartar race. In the tenth century, having subdued all their neighbours, they were attracted by the rich and beautiful regions of the south, and poured down through Khorassan into Persia.

The princes of the Seljuc dynasty had, at the above period, established full sway over Persia. Thence they crossed the Euphrates, to attack the weakened power of the Greek empire and the Saracen princes. They were triumphant; and established in Asia Minor what was called the kingdom of Roum, while other chiefs over-ran Syria and the Holy Land. At this time the whole of Western Asia was subject to Turkish dynasties. But their fall was preparing. The outrages, of which their rude bands were guilty, formed one of the chief motives which impelled the European powers to the great enterprise of the crusades. The Latin nations poured in with a force which the Turks were unable to withstand; and the thrones of Jerusalem and Iconium were speedily subverted. At the same time, the Mongols, under Zingis, having achieved the subjugation of Tartary, followed the traces of the Turks, wrested from them Persia, and subverted the caliphate. At the end of the thirteenth century, the once proud dynasties of Seljuk were reduced to a number of scattered chieftains, occupying the mountainous districts and high plains of Asia Minor, and obliged to own the supremacy of the Mongul khans of Persia.

Othman, or Ottoman, one of their chiefs, was the man who, in 1299 erecting an independent standard, founded the mighty Ottoman empire. He appeared first under the aspect of a Scythian chief, a leader of shepherds and bandits; but first conquering and then uniting under his standard a number of neighbouring tribes, he assembled a formidable military force. His successor, Orchan, having taken Prusa, erected it into a capital, which almost defied the imperial metropolis Constantinople. His successors continually augmented their force by the peculiar institutions under which they trained to arms the captive youth of the conquered countries. They continued to make acquisitions from the decrepid Greek empire, until the walls of Constantinople enclosed all that remained of the dominion of the Cæsars.

The Turkish empire was raised to its greatest height by the capture of Constantinople, in 1453, by Mahomet II. The power of the Turks now struck terror into all Europe. In the succeeding century they subdued Egypt, the Barbary States, and all the Arabian coast on the Red Sea. In Europe they rendered tributary the Crimea and the countries along the Danube; they over-ran Hungary and Transylvania, and repeatedly laid siege to Vienna. When affairs came to that crisis, however, the European states took the alarm, and all the princes of Poland and Germany united against the invader, who was repeatedly driven back with prodigious loss. At sea, notwithstanding the gallant resistance of the Venetians and

the knights of St. John, the Turks long carried all before them: they subdued Rhodes, Cyprus, and all the Greek islands; and it was only at the little rock of Malta that their progress received a check.

The decline of the Ottoman power was perceptible in the course of the seventeenth century, and proceeded rapidly in the eighteenth. The rigour of that discipline, by which they had rendered themselves so formidable, was insensibly relaxed; the grand signior resigned himself to the luxuries and indulgences of the seraglio; and the revolts of the pachas in every quarter distracted the empire. When the European powers began to make war with regular armies, they easily repelled those tumultuary bands which followed the Turkish standard. Above all, when Russia began to develope her gigantic energies, the star of Ottoman ascendency rapidly declined. Defeated in every battle, losing several of their finest provinces, and holding the rest by a precarious tenure, the Turks ceased to be formidable. In the last war, indeed, General Diebitsch entered Adrianople, and saw the road to the capital open; though peace was then granted on moderate terms. But Turkey has since undergone a still deeper humiliation, having seen her empire almost subverted by Ibrahim, son to the pacha of Egypt, when she was saved only by the interposition of Russia, her mortal enemy, and obliged to sacrifice Syria and Palestine, two of the finest portions of her territory.

SECT. IV.—*Political Geography.*

The Turkish political system has no analogy with that of any other European power, but is formed upon a purely Asiatic model. Its principle is the subjection of the whole administration, civil, military, and religious, to the absolute disposal of one man. The *grand signior*, (*fig.* 508.), the "shadow of God," and "refuge of the world," is considered as reigning by divine commission, and uniting in himself all the powers, legislative, executive, judicial, and ecclesiastical. Selim I., by the conquest of Egypt, acquired a right to the title of *caliph*; but *sultan*, or *grand signior*, is that by which the ruler of Turkey is best known. So deeply rooted is the veneration for the Othman family, that, amid so many bloody and violent revolutions, the idea has never been entertained of a subject seating himself on the imperial throne; and after cutting off the head of one sultan, nothing has ever been dreamt of but raising the next heir to the throne. Under the Mussulman system, the spiritual and temporal powers being considered as essentially one, a peculiarly sacred character is communicated to him in whom they centre. According to profound Mahometan doctors, nothing that the sultan does can be morally wrong. He is considered also the proprietor of all the lands in his dominions, excepting those dedicated to pious uses.

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Grand Signior.

The vizier (*fig.* 509.), assisted by the divan, is the person upon whom devolves entire the exclusive power of the state. The grand signior does not even, like some other Oriental despots, make a show of sitting in judgment, but delegates that function also to his minister; who, thus invested with the authority of supreme magistrate, appoints to all civil and military offices, puts to death all who oppose his measures, and commands the army in person, leaving at court in his absence a pacha, under the title of *caimacan*. He is also accustomed to go disguised through the city, to examine the weights, measures, and qualities of the goods; and, on discovering any deficiency, to apply the bastinado, nail the offender by the ear to the door of his shop, or even strike off his head. The divan consisted formerly of six pachas of three tails; but of late has been formed of the principal state officers: the two *cadi askers*, or judges of the army; the *kiaia bey*, who forms a sort of *reis effendi* (*fig.* 510.), an officer combining the functions of chancellor with those of secretary of state both for the home and foreign departments; the *tefterdar effendi*, or general treasurer of the empire; the *tchelebi effendi*, a sort of naval secretary; the *capitan pacha* (*fig.* 511.), or lord high admiral. In general, there is no exact correspondence between the functions in this and in a European court or ministry; a circumstance from which confusion is often apt to arise.

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Grand Vizier.

The *muftis*, and *ulema*, or body of *mollahs*, form the depository of the laws of the empire, and the only class who approach to the character of a national council. They are not, as has sometimes been supposed, ministers of religion; though since the Koran and its commentaries form the only law of the empire, and the mollahs receive their education in the *madresses*, or colleges attached to the mosques, they bear quite a sacred character. The *mufti* (*fig.* 512.) is the second person of the empire in dignity; he girds the sabre on the sultan, an act equivalent to coronation; and the sovereign advances seven steps to meet him, while he advances only three towards the grand vizier. No great measure of state can be

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Reis Effendi.

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Capitan Pacha.

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Mufti.

regularly taken, or command the respect of the empire, without a fetwa from the mufti. The sultan cannot behead him; and though Murad IV. sought to evade this statute by pounding him in a mortar, the interpretation was scarcely considered sound, and has not been followed. The sultan, however, in case of high cause of wrath, possesses, or at least exercises, the power of deposing the mufti, and thus secures in general his strict subserviency; though at other times that officer, by placing himself at the head of popular discontents, has been the means of bringing the sovereign to an untimely end. The members of the ulema ought to be elected by the mufti. after strict examination, and with some regard to hereditary claim; but the grand signior is in the habit of nominating upon his own authority, and from pure favour.

Justice is administered by members of the ulema: those in the large towns are termed *mollahs*, and in the smaller towns *cadis;* the nominations being made by the sultan from a list presented by the mufti. The proceedings are conducted with the greatest simplicity. At the *divan hanneh*, or vizier's tribunal, there is a written statement of the case, which must, however, be comprised in a page, leaving room for the sentence at the bottom. The parties then plead; two or three witnesses are examined on each side; and the decision is given on the spot. Justice is thus neither costly nor tedious, but it is venal. Few judges are inaccessible to a bribe; and false witnesses are more numerous, and more shameless, than in almost any other country. After all, Turk against Turk has a tolerable chance; but those beyond the pale of the faith afford a mine of wealth to true believers, who, in opening a process against them, are almost certain to gain something.

The court and seraglio form not only the most brilliant appendage to the Ottoman Porte, but one of the great moving springs of its political action. In this palace, or prison, are immured 500 or 600 females, the most beautiful that can be found in the neighbouring realms of Europe, Asia, and Africa; wherever Turks can rule, or Tartars ravage. The pachas and tributary princes vie with each other in gifts of this nature, which form the most effective mode of gaining imperial favour. Into these recesses only short and stolen glances have been cast by Europeans; but their reports attest a splendour like that which is celebrated in the Arabian tales: the walls and ceilings are of olive or walnut wood, curiously carved, richly gilded, and often inlaid with mother-of-pearl, ivory, and porcelain; the floors spread with the richest Persian carpets. The sultan does not marry, judging his place too high to admit any one to such an equality. From the multitude of beauties, however, he selects seven, who are called *kadunis* or favourites, while the remaining crowd are confounded under the appellation of *odalisques*, or slaves. The number seven cannot be exceeded; but when a vacancy is wanted, it can be effected by removing one of them to the old seraglio, a dignified retirement, which receives also the favourites of the prince immediately on his death. These imprisoned beauties are guarded by numerous bands of unfortunate slaves reduced to the state of eunuchs. The gates and outer apartments are guarded by white eunuchs; but black eunuchs, rendered safe by their deformity, are stationed in all the interior recesses. Many of these personages rise to great distinction, and the *kislar aga* (*fig.* 513.), their chief, is one of the leading characters in the empire, and even a sort of head of the church. In another palace are reared a great body of *ichoglans*, or pages, trained in all graceful exercises, for the purpose of personal attendance on the sultan. They are often raised to high offices of state, though in that capacity they are viewed with utter contempt by the hardy chiefs who have forced their way by merit and services. Another class of eminent characters in this court consists of the mutes. A Turkish grandee, lolling on his sofa, requires incessant attendance: his pipe, sherbet, and slippers, must be at any moment handed to him or to his guests; he must therefore have some one before whom he can speak without reserve, and without fear of his secrets being made public; but many, to reach such high employments, feign themselves to be labouring under

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Kislar Aga.

these infirmities. Dwarfs, by a taste which seems common to uncultivated minds, are also favourites; and when any individual unites the perfections of being deaf and dumb, and a dwarf, he becomes one to whom the highest value is attached.

The finances of the empire are shrouded in very deep mystery; indeed, their amount cannot be in any degree measured by that of the sums paid into the treasury. The lands held as the sole property of the sultan are let out on the tenure of military service; and thus is defrayed the whole expense of the troops, with the exception of the janissaries. By a similar assignment of land, the mosques and all other public establishments are supported; and the sultana mother is, by the same arrangement, enabled to maintain the state belonging to her rank. The numerous princesses are bestowed in marriage on the pachas and other opulent individuals, who find this honour dearly purchased by the mortifications which they are doomed to endure from the haughtiness of these imperial spouses. Of the direct contribution the principal is the *haratsh*, or capitation tax, imposed on all subjects of the empire who are not Mahometan. It has varied extremely; the present statutory amount is ten, six, or three piastres, according to the different gradations of supposed wealth in the contributors; but there is much that is arbitrary and oppressive in the actual levy of this impost. In the subject provinces of Moldavia and Wallachia, the haratsh is paid in one sum by the princes or vaivodes; but both from them and from the pachas his imperial majesty is pleased to accept of numerous presents on various occasions, to say nothing of those which it is at least highly prudent to make to the officers of state and the occupants of the harem. Hence it was calculated that where the tribute was only 65,000 piastres, the presents exceeded 500,000. In short, all the offices of the empire are regularly put up to sale. Forfeiture and confiscation form also an extensive source of revenue, independently of the principle by which the sovereign is held the legal heir of all who die in his service. The customs are considerable, being levied by farm, without much rigour; but the attempts to establish an excise have been met by violent discontents, and even insurrection. One most pernicious resource is that of the monopoly of grain. It is very difficult to say what sums of money actually enter the *miri*, or imperial treasury. De Tott and Cantemir make an estimate of 3,900,000*l*., which is probably nearer the truth than that of Olivier, who makes it upwards of 6,000,000*l*.

The military system of the Turks, formerly the terror of the greatest powers in Europe, and now despised by almost the meanest, has undergone no formal change. It is supported on a basis somewhat resembling the feudal militia, though without any thing of an hereditary character. All the lands are distributed, in portions of 300 acres and upwards, among the *zaims* and *timariots*, on condition that they bring into the field, and support at their own cost, a number of horsemen proportioned to the extent of their lots. The number of *timars* and *zaimets* is stated at 50,160; and the collective force which they ought to bring into the field at 150,000. The troops are, however, bound to keep to their standards only between the days of St. George and St. Demetrius; that is, between the middle of April and the middle of October. The above are termed the *toprakli*, or feudatory troops; the rest are the *capiculi*, or paid troops, who alone approximate to the character of a regular force. Of these last, the chief have hitherto been the *janissaries* (*fig.* 514.), who for a long period might be said to hold at their disposal the Ottoman empire; and their *aga* was one of its greatest officers (*fig.* 515.). They originated in a peculiar policy of the first sultans, who, selecting the most vigorous of the young captives, trained them up in the Mahometan religion, and in all the exercises fitting them for war. They were afterwards, however, recruited out of the Mussulman population, many of whom even solicited a nominal admission, with a view to the privileges and exemptions attached to the order. The number on the list was thus very great; but according to Mr. Thornton, the actual issue of pay, at the daily rate of threepence, implies only a force of 40,000. Recently, however, this powerful body has been annihilated by the vigorous and bloody measures of Mahmoud, the reigning sultan, who is using the utmost exertion to organise a new force similar to that maintained by the other European powers. There is also a paid force of *spahis*, or cavalry, amounting to 15,000. Of this limited amount, a great proportion is required for the body-guard of the sultan and pachas, and for the police; so that the field-armies of the Turks consist almost entirely of the *toprakli*, or feudatories, a huge tumultuary mass, resembling the armies of Europe during the feudal ages. Their order of encampment has been compared to a number of coins taken in the hand and scattered over a table; and their march resembles the career of the volcano, desolating every spot over

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Janissary.

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Janissary Aga.

which they pass: as they advance, the inhabitants flee to the mountains, and secrete all their most valuable effects. The Turkish soldiery make merely one vigorous push against the enemy, and if this fails they are discouraged, disperse, and return to their homes. Upon such a system, they cannot, in modern times, at all match in the field regular armies. It would be rash, however, to infer, from the poor figure they have made in all the late wars, that the Turkish empire would fall an easy prey to an invader. It has many defensive resources. The Turks have an excellent light cavalry; they skirmish well, and defend fortresses with great obstinacy; and in extremity the grand signior can summon to arms the whole mass of the population, who are not slow to obey the call whenever impelled by any national motive, such as would be the invasion of the empire by an infidel army.

The rayahs, or tributary subjects of the empire, form a class subjected to a peculiar system of policy. The propagation of the Koran by the sword is a fundamental principle of the Mahometan faith, and death inflicted on the infidel is esteemed the surest passport into paradise. To justify this slaughter, however, it is necessary that there should be resistance; and not to strike off the heads that bend, has become an established maxim. But the utmost boon which the vanquished *giaour* can hope is, that his life may be spared: his person, his property, his all, belong to the votaries of the true faith. An indiscriminate spoil was at first made; but policy afterwards dictated to the sovereign the plan of commuting these indefinite claims for the fixed tribute or capitation called *haratsh*, which, with exclusion from all offices of trust and power, formed the only legal penalties. Of course, however, in such a government, various detached acts of oppression and extortion would be committed, against which the despised and abhorred Christian would in vain protest. The Greeks had three high offices to which they might aspire; that of princes of Moldavia and Wallachia, and of *dragoman* or interpreter; but these were all in the gift of the Porte; and the intrigues by which they were to be sought served still more to degrade the Greek character. Yet, even under this imperfect protection, the nation, being left in the exclusive possession of many industrious and lucrative occupations, insensibly accumulated a degree of wealth which raised them to importance, and excited that desire of independence which has produced such striking effects.

Sect. V.—*Productive Industry.*

Agriculture, in European Turkey, is depressed at once by arbitrary exactions, and by the devastation consequent on frequent wars in many of the finest provinces; yet its productions are valuable. The grain, which grows in the plains of Roumelia, Bulgaria, and on the banks of the Danube, is considered the finest in the empire. From the same plains a great quantity of excellent butter and bad cheese is obtained, the latter being made of skimmed milk. The steep sides and deep valleys of Hæmus and Rhodope are covered with vast flocks of sheep, affording the most delicate mutton, but a coarse kind of wool, which, however, from its plenty, forms a large article of export. Buffaloes are chiefly employed in agriculture; and, though their flesh is unpalatable, their skins, being thick and strong, are of considerable value. Hare skins, also, are so abundant as to form an article of importance in commerce. Bees innumerable are reared, and yield a profusion of honey and wax. A fine white silk is produced in Bulgaria and the plain of Adrianople, but not equal to that of Bursa. Cotton flourishes in the plains south of Hæmus, though nowhere so copiously as in Macedonia and Thessaly.

Manufactures are in a still less flourishing state; yet the very fine one of Turkey leather has been carried to the highest perfection at Gallipoli, and some other places along the Dardanelles, as well as in several cities of Asia Minor. Olivier vainly enquired into the secret of its preparation, which is still hid from Europeans; he could not even ascertain whether it lay in the excellence of the leather, or in the mode of dressing and dyeing. Adrianople fabricates a fine cotton thread, similar to that of Larissa, by which it is now surpassed. Mr. Thornton praises the printed muslins of Constantinople. Turkey carpets belong to Asia Minor, where manufacturing industry is generally more advanced than in European Turkey.

The commerce of this part of the empire, excluding Greece, is almost confined to Constantinople. Perhaps no city was ever better situated for trade, either by land or sea; but the proud indolence of the Turks, altogether averse from such occupation, reduced it to a secondary rank; it is therefore confined to the tributary races, and to Frank merchants at Constantinople, acting under great difficulty and restraint. From Constantinople would be exported a good deal of grain, were it not for the impolitic prohibition, which does not however prevent a considerable contraband trade. Other productions of European and Asiatic Turkey, wool, buffalo hides, skins, goats' hair, Turkey leather, wax, drugs, silk, cotton, and copper, find their chief vent through the capital. The pride of the Orientals, and their peculiar habits, render them little dependent on imports from the West. Nevertheless, the European merchants contrive to introduce some cottons and sugar, also coffee from the West Indies, under the disguise of Mocha, together with glass, porcelain, and other brilliant fabrics for the ornament of the harem. From the Black Sea and the Caspian are brought slaves in great numbers, also a vast quantity of salt-fish and caviare, which are required for

the Greek fasts. Before the revolutionary war, the intercourse with the West was chiefly maintained by Marseilles and Leghorn; but when their flags could not appear on the Mediterranean, the mercantile marine of the Greeks carried on all the traffic of the Levant. In the present state of confusion, it is difficult to say either what are, or what are likely to be, the channels of this commerce.

The roads, as usual in absolute monarchies, are supported by the government, the pachas having assignments upon the national domains for that purpose. The grand military routes are thus maintained in tolerable order; but the by-paths are greatly neglected. We are not aware that canals have ever entered into the plans of Turkish improvement.

SECT. VI.—*Civil and Social State.*

The national character and aspect of the Turk is thoroughly Oriental, and in every point contrary to that of the Western European nations. All the external forms of life are dissimilar, and even opposite. The men, instead of our dresses fitted tight to the body, wear long flowing robes, which conceal the limbs. Instead of standing or sitting on chairs, they remain stretched on sofas in luxurious indolence; considering it madness to stir or walk, unless for special purposes or business. They sit cross-legged, especially at meals. On entering a house, they take off, not their hat, but their shoes; in eating, they use the fingers only, without knife or fork; they sleep not on beds, but on couches on the ground. The females, excluded from all society, remain shut up in the harem, and must not be seen or named by any person of the opposite sex. The grave, secluded, and serious cast, impressed by a despotic government and by the Mahometan law, is more decided in the Turk than in the Arab or Persian: he is "a solemn solitary being." The abject submission to a master, which is esteemed a religious duty, is combined with the pride of a conquering people, and with the consciousness of being surrounded by subject races on whom he has set his foot. The deportment of the Turk to the rayah is that of the Teutonic baron towards his humblest domestic vassal. Yet, though this fancied superiority prompts to acts of tyranny and injustice to this numerous class, it seems to inspire a sense of personal dignity, which raises him above the system of falsehood and deceit which is, as it were, rooted elsewhere throughout the East. Compared with other Orientals, the Turk is honest, and his word may be trusted. From this combination of the slave and the aristocrat in circumstances of a political nature, of austerity and licentiousness in religion, the character of the Turks exhibits many striking contrasts. "We find them," says Thornton, "brave and pusillanimous; good and ferocious; firm and weak; active and indolent; passing from austere devotion to disgusting obscenity; from moral severity to gross sensuality; fastidiously delicate and coarsely voluptuous; seated on a celestial bed and preying on garbage. The great are alternately haughty and humble; arrogant and cringing; liberal and sordid. Though the Turk be naturally sedate and placid, his rage, when once roused, is furious and ungovernable, like that of a brute." Hospitality and giving of alms are Oriental virtues. Every grandee keeps a sort of open table; and the fragments of the feast are distributed to the poor at the door. It is rare to hinder any one from plucking herbs or fruit in a garden or orchard. This humanity is even injudiciously extended to the lower creation, which enjoy at Constantinople a sort of paradise. The dogs, though excluded as unclean from the houses and mosques, are allowed to multiply in the streets till they become a perfect nuisance; the doves feed at liberty on the grain in the harbour, which echoes with the crowded clang of unmolested sea-birds.

The religion of Mahomet is considered to be preserved throughout this empire in a state of peculiar and exclusive purity. The Turk is imbued from his earliest infancy with the loftiest conceptions of his own spiritual state, and with a mingled hatred and contempt of every other. This feeling is entertained, not only towards the "infidel," but still more deeply towards the Persian *Shiite*, whose tenets respecting the person of Ali are so detested, that, according to the soundest doctors, it is as meritorious to kill one Shiite as twenty Christians. The chief observances of their religion consist in the *namaz*, or prayer, repeated five times a day, preceded by ablution, and accompanied by prostrations; and in the observance of the fast of *Ramadan*, when during a whole month neither solid food nor liquid is tasted before sunset. The mosques have certain officers attached to them; as the *muezzin*, who, from the top of the highest minaret, calls the neighbourhood to prayers; the *sheiks* and *kialibs*, who preach and read; the *imam*, who has the general care of the mosque, and, in the villages, performs alone all the other sacred duties. These functionaries are not distinguished from the rest of the citizens either by habits or deportment; and it is remarkable that there is not an office of religion which may not be regularly performed without a priest, either by the magistrate or by private individuals. The sultan, as grand imam, or head of the church, devolves the duties of this character on inferior officers; and most especially on the *kislar aga*, or chief of the black eunuchs, who, by a singular arrangement, is entrusted with the superintendence of all the mosques. It has been said, that sound belief and the strict observance of the above ceremonies are considered as securing paradise, without the necessity of repentance or of good works. We find the disuse of wine, the giving of alms, and the founding of caravanseras, practised on a great scale, from religious motives. The first

of these is a good deal evaded; yet religion has certainly effected the general substitution of coffee, opium, and tobacco, though even the last is not considered rigidly orthodox. Predestination is celebrated as a Mahometan tenet, and is indeed ever in their mouth. "It is written," is the resigned comment with which they meet the most severe calamities, and even death itself. Yet, as they take the same anxious and even inordinate care to avoid these evils as others, the dogma perhaps is rather in their mouths than in their hearts; and the formidable valour which, in the career of their victories, was attributed to it, no longer stands in need of such a solution. There are institutions which, though not ordained by Mahomet, have become essential branches of the present system. Such are the *dervishes*, a body who seek, by fantastic displays of self-denial, and contempt of the outward decencies of life, to acquire the reputation of superior sanctity. The most eminent are the howling dervishes, who scream out the name of God till they foam at the mouth and fall to the ground quite exhausted. In one sect the zealots founded their fame upon getting all their teeth drawn out; but it has not made much progress. The belief in charms, sorcery, magic, and the evil eye, was condemned by the precepts of Mahomet; but as this censure was contrary to the spirit of an ignorant and superstitious people, it has not taken effect, and these particulars continue to form an essential part of the popular creed in Mahometan countries.

The learning of the Turks is comprised within a very limited compass. The torrent of their barbarous invasion buried under it not only the splendid though corrupted remains of Greek science, but that of a secondary description which was attained by the Arabs under the caliphate. Yet some of the early sultans were patrons of learning; as, indeed, most conquerors have been. Among these was Orchan, who founded at Bursa a highly celebrated academy; and Mahomet II., whom Western Europe regards as a ferocious tyrant, but who in the East is almost as celebrated for his learning and love of learning as for his victories. It cannot be said that even now learning is left absolutely without encouragement. *Madresses* richly endowed are attached to every mosque, and in them a long and laborious course of study is provided for those who aspire to form part of the ulema. Ten degrees are conferred by these madresses, and the student is often forty years old before he can attain the highest, that of Suleymanieh. The misfortune is that the studies there pursued have no tendency to enlarge the mind, or to adapt it for the duties of active life. They consist of the rhetoric and logic of the dark ages; of discussions respecting the comparative merits of Abubekir and Omar; and of knotty theological questions, such as, whether the feet, at rising, should be washed with water, or only be rubbed with the bare hand. The Turks are ignorant of the most common instruments in natural philosophy, the telescope, the microscope, the electrical machine, which, if presented to them, are merely shown as objects of childish curiosity. Persons of the highest rank scarcely know any thing of countries beyond the boundaries of the empire. Astrology, so long exploded from the list of European sciences, continues in Turkey to influence and direct the public councils. No expedition sails from Constantinople, no foundation of a building is laid, nor public officer installed, until the *nunedjem bachi* or chief of the astrologers, has named the fortunate day. With all their pride, they are obliged to have recourse to Christian physicians, whose skill they ascribe to necromancy, and who they therefore expect will predict at once, in the most precise manner, the issue of their complaints. All the arts have degenerated into mechanical trades. Neither architecture, painting, nor music is practised with any degree of taste or genius.

The condition of the female sex in Turkey is particularly foreign to our manners and ideas. From the moment of marriage they are immured in the harem, excluded from the view of the public and of all of the opposite sex, their nearest relations being alone admitted on occasions of peculiar ceremony. This circumscribed existence, and the necessity of sharing with a multitude of rivals the favour of a husband, or rather master, appear intolerable to European ideas. It is not, however, without compensations, though it seems a great extravagance in Lady M. W. Montagu to allege, respecting Turkish females, that they are the only free women on earth. They are allowed to visit and receive visits, and to frequent the baths; ablution being even obligatory in a religious view; and there they meet with numbers of their own sex. Europeans have not failed to surmise that opportunities are thus taken to elude the vigilance of their guardians, and that the bars of the harem are of little avail. Other well-informed writers doubt if intrigues, which can be carried on only at the hazard of life, and with numerous accomplices, can be very frequent. The advances, in such cases, are always made by the lady, who likewise arranges the mode of meeting, provided the gentleman be willing to risk his head in the adventure. It can admit of less doubt that, by the channels already named, all the news of the city finds its way into the harem, and that gossip is carried on there as busily as in any European coterie. Here also favours are solicited through the channel of female relations, and the harem becomes often the centre of intrigues by which the empire is shaken. Peculiar veneration is attached in Turkey to the parental character, and particularly to that of mother. Even in the fall of a great man, his harem is always respected, and the property belonging to his wives is left untouched, so that they sometimes become his support. Marriage in Turkey has nothing sacred; it is merely a civil contract, fixing the amount of the dower, and perhaps limiting the husband as

to the number of his other wives. If the iman be present along with the cadi, he is only a legal witness. Those, with respect to whom there is no such contract, rank as concubines, who are chiefly purchased slaves. In Constantinople there is a bazaar, a vast square building, with an interior court, "where man does not blush to expose to sale the most lovely and interesting part of the creation." Infidels are excluded, on account of the dreaded influence of their evil eye; yet French travellers, who have caught some stolen glances, report that the captives were seen seated upon mats, with their legs crossed, in groups of fifteen. Pouqueville did not observe in these fair sufferers any sense of their dismal situation; they were chatting with the utmost volubility, laughing and singing; but Olivier, in the group which he saw, observed one who was overwhelmed with the deepest affliction. The children of concubines are considered as legitimate. Polygamy is permitted by law, and carried sometimes to a vast extent, but only by the rich. The poor and even others who study domestic quiet, find one wife quite sufficient. Divorce is permitted, but is not common. Disagreement of temper does not bear so hard on the husband, from the separate state in which he lives; adultery is avenged by the poniard; so that sterility, reckoned so deadly a curse throughout the East, is the prevailing motive for divorce.

The rayahs, or subject infidels, who form so large a part of the population of Turkey, are chiefly Greeks, Jews, and Armenians. The Greeks have been largely noticed, in treating of their native district. The Jews, exposed to every insult, are more degraded, both as to character and state, than in Europe. They carry on banking; usury, at enormous rates; and various small trades, despised by others, by which a penny can be turned; and are alleged to have few scruples on any thing by which their gains may be augmented. The Armenians carry on almost all the inland trade of the empire, particularly in Asia; and are an industrious, frugal, sober, and not very dishonest race. According to Pouqueville, the Turk, when he deigns to trade, sells with the air of conferring a favour; the Greek, artful and active, is eloquent in setting forth his commodities, appealing to heaven for their value and his own probity; the Armenian establishes his speculations with coolness and reflection, his eye always fixed on the future; while the Jew buys, sells, offers his agency in business, and is all activity, all attention; nor can the uniform contempt and aversion with which he is treated ever repel his assiduities.

The amusements of the Turk are chiefly domestic. His delight is to give himself up to continued and unvaried reverie; to glide down the stream of time without thought or anxiety; to retire under the shade of trees, there to muse without any fixed object, and to inhale through the pipe a gentle inebriating vapour. Stretched in luxurious ease, he takes pleasure, however, in listening to the narrative of the professed story-teller, or in viewing the dances of Greek youths or Turkish *balladières*, at which, though by no means remarkable for decorum, he even allows the presence of his wives. The ball, the theatre, the crowded party, all that in Europe can be accounted gaiety, are utterly foreign to Turkish manners.

The dress of the Turks consists of long, loose robes, which do not encumber their stately walk, though they would be incompatible with running or rapid motion. The absence of all those bandages and ligatures by which Europeans are shackled must be highly favourable to the developement of form, and even to health. The turban is the most characteristic feature of Eastern dress; and its varied form and ornaments not only discriminate the rich from the poor, but afford a badge to the various professions, to each of which a costume is appointed by government, and strictly enforced.

The food of the Turks is not very luxurious. It consists chiefly of stews and hashes, particularly that favourite one called *pilau*, with salads, olives, and sweetmeats. In wine, though prohibited by their religion, some sultans and great men have deeply indulged; but in general its use is confined to the lowest ranks. Coffee and sherbet are handed about on all occasions. Opium, as a substitute for wine, is taken to excess, and often fatally; those addicted to it usually fall victims before the age of forty.

SECT. VII.—*Local Geography.*

Turkey in Europe, when we have excluded Greece, may be divided into Roumelia, or that great plain, south of Hæmus and Rhodope, known to the ancients as Thrace; and into Bulgaria, the northern plain between that chain and the Danube. The rest of the territory consists of tributary Christian states, which are ruled by Christian princes nominated by the Porte, and which vacillate between independence, devastation, and subjection.

Roumelia has been made to include all continental Greece to the frontier of Albania; but, in the present restricted sense it forms a large plain, fertile in grain, fruits, silk, and cotton; while numerous flocks and herds cover the hanging sides of the mountains. It forms the central and metropolitan province of the empire, almost exclusively held by a Turkish population, and including the two great capitals Constantinople and Adrianople.

Constantinople (*fig.* 516.) occupies perhaps the most commanding and important site of any city in the world. Mistress of the long chain of Straits connecting the two great seas which separate Europe from Asia, it forms the link between those continents. Hence, even while Thrace was steeped in barbarism, Byzantium flourished as a great commercial repub-

lic, until the period when Constantine raised it to higher importance by giving to it his name, and making it the capital of his empire. Even after the separation of the West, it continued the metropolis of the East, and rose in importance during the encroachments on its territory by the invading tribes. As the world was overwhelmed with the prodigious inundation of the barbarians, Constantinople became the refuge of all that remained of

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Constantinople.

ancient science and civilization. Reduced by Mahomet II., it became the capital of Moslem ignorance and superstition; yet it still continues one of the greatest cities in Europe, ranking next to London and Paris. The population, in the absence of any kind of census, can be little more than conjectured. Mr. Eton gives the lowest estimate, which is 300,000. It is argued that Constantinople stands on somewhat less ground than Paris, that the houses are not so high, and there are larger gardens; but it must be remembered that the lower classes in the East pack together in a manner of which Europeans have scarcely an idea. Olivier, from the quantity of corn consumed, infers that the inhabitants exceed half a million; and we should not be surprised if strict investigation gave even a greater number; though it seems wonderful that Mr. Thornton should have mentioned a million of rayahs as a possible amount. Constantinople, unlike other European capitals, derives little support from the residence of any great landed proprietors or capitalists, for whom indeed it has few attractions. It rests almost entirely upon the support of those employed by the government, or soliciting from it favours and offices; and Olivier calculates that 8,000,000*l.* sterling are poured in from the provinces, which affords certainly a very ample income. We must add, however, the commercial class, and the remains of the Greek aristocracy, who are established in a quarter called the Fanar, and thence denominated Fanariots.

The situation of Constantinople is as beautiful and superb as it is commodious. Seated on the Bosphorus, at the point where it communicates with the Propontis or Sea of Marmora, it is connected both with the Mediterranean and the Black Sea by a succession of straits, easily defensible, yet navigable for the largest vessels. The port is spacious and admirable. On the side of Europe and on that of Asia rich plains spread before the eye, bounded by the snowy tops of Hæmus and Olympus. The city itself, rising on seven hills, along the shore of the Bosphorus, embosomed in groves, from amid which numerous gilded domes ascend to a lofty height, presents a most magnificent spectacle. But the moment the interior is entered, all the magic scene disappears. The streets are narrow, winding, ill paved, and crowded; the houses low and gloomy; and the hills, which appeared majestic in the view, causing steep ascents and descents, prove excessively inconvenient. But the most fatal circumstance in the structure of Constantinople is, that the houses of rich and poor are alike entirely composed of wood, while chimneys are not generally used, but their place supplied by vessels of brass or earth put under the feet. These circumstances, joined to the usual improvidence of the Mahometans, cause most tremendous conflagrations. It is even believed, with or without reason, that the Turkish public employ the setting fire to the city as a mode of communicating their opinion on the conduct of their rulers. The scene is terrible, from the extent of the blaze, the deep rolling of the drum from the top of the minarets, and the crowds that assemble, among whom even the grand signior himself is expected to be present. It is reckoned that Constantinople rises entire from its ashes in the course of every fifteen years; but no advantage is ever taken of the circumstance to improve its aspect. The fallen streets are immediately reconstructed with all their imperfections, and the houses rebuilt of the same fragile materials. This city contains, however, some structures that are very magnificent. Among them stands foremost the mosque of St. Sophia, accounted the finest in the world, first built as a church by Justinian, and converted by the conquering Turks to its present use. The mosques of Sultan Achmet and of Suleyman (*fig.* 517.) are equally vast and splendid, but not marked by the same classic taste. The numerous minarets are in general airy and elegant, and add greatly to the beauty of the city.

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Mosques of Sultans Achmet and Suleyman.

Pera and Scutari, two appendages to Constantinople, in any other vicinity would rank as cities. Pera is the Frank quarter, where reside the ambassadors and agents of all the European courts, and under their protection all Christians whose trade does not fix them at the port. It has thus become very populous, and even crowded; so that houses are obtained with difficulty. Scutari stands on the Asiatic side, in a beautiful and cultivated plain, and presents a picturesque aspect, from the mixture of trees and minarets. It carries on a very considerable caravan trade with the interior of Asia. A great forest near it contains the most splendid cemetery of the empire, as all the grandees of Constantinople seek to deposit their remains in Asia, which they consider as a Holy Land, in the possession of true believers, while Europe is almost entirely the prey of the "infidel." In this vicinity is situated the castle of the Seven Towers (*fig.* 518.) used by government as a state prison.

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Castle of the Seven Towers.

Adrianople, the city of Adrian, was the European capital of the Turkish empire before the fall of Constantinople, and it is still a large city, five miles in circumference, and containing about 100,000 inhabitants. There are several ancient palaces, and a splendid mosque erected by Sultan Selim out of the ruins of Famagosta in Cyprus; but the streets, according to Dr. Walsh, are narrow and crooked, the houses ill built of brick and mud. The ancient strength of its fortifications has gone into decay; so that General Diebitsch, in the campaign of 1829, entered it without resistance. Kirkkilissa is a large old dirty town, of 4000 houses, whose Turkish inhabitants are imbued with all the pride and prejudice of their nation; but there are a considerable number of Jewish and Greek families, who practise some industry, and send large quantities of butter and cheese to the markets of Constantinople. Bourgas, on a bay of the Black Sea, near the foot of the Balkan, has a manufactory of pottery, and carries on a considerable trade. Gallipoli, on the Strait of the Dardanelles, is also a large and commercial place, with 17,000 inhabitants.

Bulgaria forms a long plain, between Hæmus on the south and the Danube on the north. Some portions are rugged, others marshy; but upon the whole it possesses a large share of beauty and fertility. The Bulgarians, a race originally Tartar, now profess the Greek religion; and are quiet, industrious, and hospitable. Sophia, the capital, at the foot of the mountains, is a large town, with 50,000 inhabitants, and carries on a great inland trade between Salonica and the interior countries of eastern Europe. It is also the usual rendezvous of the Turkish armies taking the field against the Russians or Austrians. Schumla, or Choumla, near the entrance of another of the great passes of the Balkan, forms rather a chain of rudely entrenched positions than a regular fortress; yet such is the obstinacy with which the Turks defend such situations, that this city has repeatedly baffled the utmost efforts of the Russian army, which in 1828 was obliged to retreat with signal disaster. Even in Diebitsch's victorious campaign of 1829, he was unable to reduce the place, but passed it, and, crossing the Balkan to Adrianople, intimidated the Porte into a peace. Schumla is a large city, with numerous mosques and minarets glittering with burnished tin plates. It is distinguished by numerous workmen in tin and brass. Ternova, the ancient capital of the Bulgarian kings, commands another of the Balkan passes. Varna, a port on the Black Sea, is also a leading military station, and was the theatre of a signal victory gained by Amurath the Great over the Hungarian troops.

A chain of fortresses on the Danube, large, and strongly fortified, formed long the main bulwarks of the Turkish empire. The chief are, Widin, the residence of a pacha; Giurgevo, Nicopoli, Rustshuk, Silistria. They are all of nearly similar character, extensive and populous, uniting with their importance as military stations that derived from an extensive trade along the Danube. Rustshuk is the largest, containing 7000 houses, inhabited by Greeks, Jews, and Armenians, who carry on an active trade. The country round is a dead flat as far as the eye can reach. Giurgevo is considered by Mr. Walsh the most complete fortress in the empire. It is situated amid dismal swamps; but in the vicinity are mines of rock salt, purer than that of Cheshire, and white as snow. Silistria, in the last war, distinguished itself by a long and obstinate defence.

The principalities of Moldavia and Wallachia,* on the north of the Danube, form an extensive region, about 360 miles in length and 150 in breadth, presenting a very nearly similar aspect and character. They compose a vast plain, reaching from the river to the southern and eastern boundaries of the Carpathian mountains. The districts adjoining to these eminences are varied and picturesque, but towards the Danube become flat and marshy. The plains, particularly in Moldavia, are covered with almost innumerable stagnant pools, which communicate to the air pestilential qualities. The climate is subject to singular variations: in summer extremely hot; while in winter, under the latitude of the south of France, the Danube is for six weeks of the year so completely frozen as to bear the heaviest carriages. The soil, where not actually inundated, is exceedingly productive. Wheat is raised of excellent quality; but the Turks have imposed restrictions on the disposal of it, and the occupation of pasturage is preferred. The peasantry (*fig.* 519.) are a laborious, oppressed race, of simple habits, and living in rude abodes. They are of a low stature, weak, with light silky hair, and mostly dressed in sheepskins. The Wallachians form a considerable part of the population of Transylvania and of all the neighbouring countries. These two countries were once governed by native princes, and have not finally renounced all pretensions to liberty; yet the mixture of rude independence with debasing despotism does not cause the yoke to press at all lighter on the body of the people. The boyars exercise over them the same rude tyranny as the European nobles during the feudal ages; while the prince of Moldavia and the hospodar of Wallachia, though they must belong to the Greek nation, do not, on that account, exercise any milder yoke over their countrymen. Appointed by the Porte from favour or purchase, they employ their arbitrary sway solely to practise the most enormous exactions, and amass immense wealth during their short and precarious rule. The body of the people are of the Greek nation and faith; and in these countries the Greeks first raised the standard of independence: they experienced for some time a gleam of success; but their efforts were speedily and completely crushed. The cities in this region are large and rude. Jassy, the capital of Moldavia, is situated in the interior of the country, amid a marshy district, which renders it unhealthy. Galatz, at the junction of the Danube and the Sigeth, carries on most of the trade, and might attain considerable importance if the navigation of the former river were made free. Bucharest, the capital of Wallachia, is a much larger city, containing about 80,000 souls. It is built upon a dismal swamp, to render the streets passable over which, they are covered with boards; but, in the intervals, water springs up from dirty kennels beneath. Here, according to Mr. Walsh, European and Oriental costumes and manners unite in nearly equal proportions. The people are clothed half in hats and shoes, half in *calpacs* and pelisses; the carriages are driven as often by buffaloes as by horses. The nobles live in extravagance and dissipation, while the people are plunged in poverty.

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Wallachian Peasantry.

Servia* and Bosnia are two countries, of smaller extent, reaching westward from Bulgaria, and, like it, situated between the mountains and the Danube. They do not, however, present any similarly vast plain, but are penetrated by lofty ranges, through which flow numerous rivers, of which the most important are, in Servia the Morava, in Bosnia the Drino and Bosna. The territories consist thus in a great measure of a succession of fertile valleys, in which wheat, maize, and other valuable grains are reared; and though the people are reproached with want of agricultural industry, Bosnia at least produces grain somewhat more than enough for its own supply. Cattle, however, is the chief product in both; and they possess some valuable breeds. The hills are covered with extensive forests, and abound in fruit trees, and in valuable aromatic herbs and plants. Neither the Servians nor Bosnians are under entire subjection to the Porte. The former are chiefly of the Greek church, and under Czerni Georges made a most gallant resistance to the Turkish power, and extorted extensive privileges. The Servians, though without much literature, have a native poetry, which has attracted admiration. The Bosnians, also, though Mahometans, possess many feudal rights, having thirty-six hereditary captains, and even deputies from the towns. Their language is a dialect of the Servian. Polygamy is seldom practised, and their females appear in public unveiled.

* [Wallachia, Moldavia, and Servia no longer form an integrant part of the Turkish state, being governed by their own princes and hospodars, and in all respects independent, except that they pay a fixed tribute to the Porte.]

Several large cities are found in these provinces. The capital of Servia is Belgrade, a fortress of extraordinary strength, long considered the key of Hungary, and disputed with the utmost obstinacy between the Austrians and Turks. It is now equally distinguished as a seat of inland commerce, being the great entrepôt between Turkey and Germany, and is supposed to contain about 30,000 inhabitants. Bosna Serai, capital of Bosnia, is still larger, having been estimated to contain 60,000 inhabitants. It trafficks in arms and jewellery, and receives numerous caravans from Constantinople. Such is the spirit of independence here, that the Turkish governor is allowed to reside in the city only three days of the year. His fixed residence is at Traunick. Jaicza, the ancient capital of Bosnia, is now in decay.

The interior of Dalmatia, called commonly *Herzegovina*, belongs to the Turks, though the Austrians have succeeded Venice in the possession of the maritime districts. This territory is very rugged, and difficult of access; yet some parts are productive in wine and olives. Mostar, the capital, with 12,000 inhabitants, is celebrated for the manufacture of swords. Montenegro, a district to the south, is covered by a still bolder range of mountains, within which the inhabitants, a peculiar race, have maintained their independence against their most powerful neighbours. The Montenegrins, about 60,000 in number, are governed by a national council; and, as is usual with the inhabitants of mountainous districts, they are brave, hospitable, vindictive, and superstitious.

Albania is a more remarkable and important country. It extends about 200 miles along the Gulf of Venice and the Mediterranean, and has an interior breadth varying from 30 to 100 miles. It is entirely rugged and mountainous, diversified by numerous streams and lakes, and of an aspect extremely picturesque. The inhabitants, a race of bold mountaineers, have distinguished themselves by their valour from the earliest ages. This was the domain of Pyrrhus, whose victories in Italy made him so formidable to Rome. In the decline of the Greek empire, Albania rose, under its present name, to the character of an independent kingdom. When attacked by the Turks, it made a most gallant resistance; and the exploits of Scanderbeg, its hero, might adorn the pages of romance. Even at the beginning of the present century, Ali Pacha, a native of the country, erected a power almost completely independent of the Porte, extending over several of the surrounding countries. At length he was overpowered, betrayed, his head cut off, and suspended from the gate of the seraglio at Constantinople. The Turks thus re-established their dominion, and renewed the division into the four pachalics; those of Scutari, Ochrida, Vallona, and Butrinto.

The inhabitants of Albania are estimated at 1,200,000; and though these include a considerable number of Turks and Greeks, the basis consists of a peculiar native race, differing completely from all others in the empire. Their conversion to the Mahometan creed has been very imperfect: the males of a family go usually to the mosque, while the females attend church, and no discord arises out of this difference; so that Turks regard them as little better than infidels. The Albanian is of middle stature, with an oval visage, and high cheek-bones; bearing an erect and majestic air. He piques himself on a frank and open demeanour, holding in contempt the art and dissimulation of the Greek. He has nothing, too, of the inert solemnity of the Turk; is gay and active, yet a stranger to the habits of regular industry. He walks constantly armed; his delight is in combat, and even in rapine. The mountainous tracts are infested with numerous bands of robbers, which most of the Albanians join, for at least some part of their lives, without the least shame: it is common for one to speak of the time when he was a robber. They seek military employment also in the service of the sultan, and of the different pachas, particularly that of Egypt. Although they form only a tumultuary assemblage of men, with scarcely any subordination or regular distribution into corps, yet they are so individually active and intrepid, that they have rendered themselves formidable even to highly disciplined troops: they compose the only infantry in the Turkish armies that is at all effective.

Joannina, which Ali made the capital, has a very picturesque situation on a lake, surrounded by lofty mountains, and is supposed to contain a population of 35,000. The houses are irregularly built, intermingled with gardens and trees. A great proportion of the inhabitants are Greek. Arta, on a gulf of the same name, is the chief theatre of trade. Scutari, or Scodra, the capital of Upper Albania, is situated in a rich plain; has a population of about 16,000; and carries on some considerable manufactures of cloth. Its pacha is now the most considerable potentate in Albania.

TABULAR VIEW
OF
THE EUROPEAN STATES.

	STATES.	Area in Sq. Miles.	Population.	Religion.	Government.
	France	205,000	32,509,742	Catholics, Calvinists, Lutherans, Jews	Constitutional
	Austria	258,000	33,061,610	Catholics, Greeks, Calvinists, Lutherans, Jews, Unitarians, &c.	Absolute
	Prussia	107,000	13,842,000	Evangelists (Lutherans, Calvinists), Catholics, Jews, Mennonites, &c.	"
GERMAN CONFEDERACY.	Bavaria	30,997	4,037,017	Catholics, Evangelists, Jews	Constitutional
	Wirtemberg	7,500	1,562,033	Lutherans, Catholics, Jews, Calvinists	"
	Hanover	14,720	1,549,000	Lutherans, Catholics, Calvinists, Jews	Estates
	Saxony	7,200	1,497,000	Lutherans, Catholics, Hernhutters, Jews	Constitutional
	Baden (Gr. Duchy)	5,800	1,201,300	Catholics, Lutherans, Calvinists, Jews	"
	Hesse-Cassel (Electorate)	4,352	649,800	Evangelists, Catholics, Jews	"
	Grand Duchies.				
	Hesse-Darmstadt	4,112	720,000	Lutherans, Catholics, Calvinists, Jews, Mennonites	"
	Saxe-Weimar	1,420	232,704	Lutherans, Catholics, Calvinists, Jews	"
	Mecklenburg-Schwerin	4,755	450,200	Lutherans, Jews, Catholics, Calvinists	Estates
	Mecklenburg-Strelitz	768	84,130	Lutherans, Jews	"
	Holstein-Oldenburg	2,752	251,500	Lutherans, Catholics, Calvinists, Jews	Absolute
	Duchies.				
	Nassau	2,164	355,815	Evangelists, Catholics, Jews, &c.	Constitutional
	Brunswick	1,514	250,100	Lutherans, Catholics, Calvinists, Jews	"
	Saxe-Coburg-Gotha	1,024	156,639	" " " "	"
	Saxe-Meiningen	875	129,588	Lutherans, Jews, Catholics	"
	Saxe-Altenburg	491	114,048	Lutherans	"
	Anhalt-Dessau	363	60,000	Calvinists, Lutherans, Jews, Catholics	Estates
	Anhalt-Bernburg	340	40,000	Calvinists, Lutherans, Jews	"
	Anhalt Cothen	330	36,000	" " "	"
	Principalities.				
	Schwartzenburg-Rudolstadt	448	60,000	Lutherans, Catholics	"
	Schwartzenburg-Sonderhausen	364	51,767	" "	"
	Reuss-Greitz	153	25,000	Lutherans, Jews	"
	Reuss-Schleitz	453	58,500	Lutherans, Hernhutters, Jews	"
	Lippe-Detmold	436	77,500	Calvinists, Lutherans, Catholics	"
	Lippe-Schauenburg	213	25,500	Lutherans, Calvinists, Catholics	"
	Waldeck	459	56,000	Lutherans, Calvinists, Jews	"
	Hohenzollern-Sigmaringen	498	39,000	Catholics, Jews	"
	Hohenzollern-Hechingen	117	15,500	Catholics	"
	Liechtenstein	53	5,550	"	"
	Hesse-Homburg (Landgr.)	138	23,000	Calvinists, Lutherans, Catholics, Jews	Absolute
	Free Cities.				
	Frankfort	113	55,000	Lutherans, Catholics, Jews, Calvinists	Republic
	Bremen	72	49,000	Lutherans, Calvinists	"
	Hamburg	134	154,000	Lutherans, Jews, Calvinists, Catholics, Mennonites	"
	Lubeck	192	47,000	Lutherans, Catholics, Jews, Calvinists	"
	Kniphausen (Lordship)	17	2,860	Lutherans	Absolute
	Switzerland	15,000	2,013,000	Calvinists, Catholics, Jews	Republic
	Spain	183,000	13,950,000	Catholics	Constitutional
	Portugal	38,800	3,530,000	"	"
	Andorra (Republic)	192	15,000	"	Republic
ITALY.	Two Sicilies	43,052	7,434,300	Catholics, Jews	Absolute
	States of the Church	17,572	2,592,329	" "	"
	San Marino (Republic)	22	8,400	Catholics	Republic
	Tuscany (Gr. Duchy)	8,759	1,275,000	Catholics, Jews	Absolute
	Lucca	434	145,000	Catholics	"
	Parma, Duchies	2,250	440,000	"	"
	Modena, Duchies	2,145	400,000	"	"
	Monaco (Princip.)	50	6,500	"	"
	Sardinia	29,534	4,300,000	Catholics, Calvinists (Waldenses), Jews	"
	Ionian Islands	1,310	192,848	Greeks, Catholics, Jews	Republic
	Greece	21,000	752,000	Greeks, Catholics	Constitutional
	Turkey	150,000	7,000,000	Mahommedans, Greeks, Jews, Catholics, Armenians, &c.	Absolute
	Moldavia	15,500	450,000	Greeks	?
	Wallachia	28,800	970,000	"	?
	Servia	12,000	360,000	"	Constitutional
	Cracow (Repub.)	500	114,000	Catholics, Lutherans, Jews	Republic
	Russia	1,691,000	56,800,000	Greeks, Catholics, Lutherans, Mahommedans, Jews, Calvinists, Armenians, Hernhutters, &c.	Absolute
	Swedish Monarchy	297,000	3,821,384	Lutherans, Catholics, Jews	Constitutional
	Denmark	22,000	2,040,000	Lutherans, Jews, Catholics, Calvinists, &c.	Estates
	British Monarchy	121,000	24,304,799	Episcopalians, Catholics, Presbyterians, Methodists, Quakers, Mennonites, Jews, &c.	Constitutional
	Holland	11,100	2,745,000	Calvinists, Catholics, Lutherans	"
	Belgium	13,000	3,791,000	Catholics, Calvinists	"

Am. Ed.

ARCTIC OCEAN
EUROPEAN RUSSIA
ASIATIC RUSSIA
C. Mitschen
Britvin C.
Valgatch I.
Kirgese Steppe
Aralsk
Samarcand
Desert of Gobi
Mongolia
Thibet
Himalaya Mts.
Delhi
Bombay
Hindoostan
Arabian Sea
Bay of Bengal
Laccadive Is.
Maldive Is.
Ceylon
Dondera Hd.
Persian Gulf
Red Sea
Str. of Babelmandel
Aden
Mocha
Muscat
Persian
Cyprus
Corfu
Arabian Desert
Persia
Ispahan
Cashmere
Balochistan
Cabul
Kandahar
Candeish
Coromandel Coast
Malabar Coast
Caspian Sea
Aral Sea
Volga R.
Don R.
Kirgese Mts.
Altay Mts.
Elburz Mts.
Ghauts Mts.
Nilgherry Mts.
Cabool R.
Indus R.
Ganges R.
Nerbudda R.
Tapty R.
Godavery R.
Kistna R.
Cauvery R.
Euphrates R.
Tigris R.
Jaxartes R.
Oxus R.
Obi R.
Irtish R.
Lena R.
Yenisei R.
Amoor R.
Hoang-ho R.
Yang-tse-kiang R.
Mekong R.
Irawaddy R.
Menam R.
Salween R.
Brahmapootra R.
Sea of Japan
Yellow Sea
China Sea
Gulf of Siam
Gulf of Tonquin
Gulf of Martaban
Gulf of Cambay
Gulf of Cutch
Gulf of Manaar
Palk's Strait
Sea of Okhotsk
Behring's Str.
Kamtschatka
Japan
Formosa
Hainan
Borneo
Sumatra
Java
Celebes
Timor
Philippines
Moluccas
New Guinea
Australia
Indian Ocean
English Miles
100 200 400 600 800
Longitude East 70 from Greenwich 80

ARCTIC OCEAN
AMERICA
Cape Chelagskoi
Cape Severovostochnoi
New Siberia
Liakhov I.
Bear I.
Wrangel I.
Behring Str.
Anadyr R.
Gulf of Anadir
Cape Fodsin
SEA OF KAMTSCHATKA
C. Pachachinskoi
Paramushir I.
Behrings I.
C. Kamotskoi
SEA OF OKHOTSK
C. Lopatka
Kurili Isles
Company's I.
Staten I.
Str. of Matsmai
JAPAN
Yedo
Gt. Loo Choo I.
Bonin Is.
Low I.
Sulphur I.
Farallon
Volcano Is.
Parece Vela
Grigan
Pagon
Tinian
Guaxan
PACIFIC OCEAN
EASTERN SEA
Tapin Is.
Tar Wan or Formosa
C. Enganno
100 200 400 600 800
English Miles
Bashee Is.
Hainam
CHINA SEA
PHILIPINE ISLANDS
Mindoro
Samar
Leyte
Pulow Is.
MINDANAO
Mindoro Sea
Palawan
Sooloo Sea
Sulibabo Isles.
Gulf of Siam
Nicobar Is.
Andaman Is.
Gt. Natuna
BORNEO
Celebes
Gilolo
Morty
Waygeou
Mysory
Johle
PAPUA or N. GUINEA
Arou Is.
Timor Laut
Sumatra
Java
Sunda Str.
Malacca Str.
Bay of Bengal
Tenasserim
Siam
Cambodia
Tonquin
Gulf of Tonquin
Pracel
Yellow Sea
Corea
Gulf of Corea
Kiusiu
Nankin
Pekin
Yellow R.
Hoang-ho R.
Yang-tse-kiang R.
Amoor R.
Shantung Mountains
Great Wall of China
Desert of Gobi
MONGOLIA
CHINESE EMPIRE
THIBET
TARTARY
Kuenlun Mountains
Himalaya Mountains
Thian-shan Mountains
Altai Mountains
Yablonoi Mountains
Stanovoi Mountains
Yablonoi
Yenisei R.
Lena R.
Obi R.
Irtish R.
Ural Mountains
Caspian Sea
Aral Sea
Sea of Okhotsk
Behring Str.
Longitude East 100 from Greenwich 110 120 130 140

BOOK II.

ASIA

CHAPTER I.

GENERAL SURVEY OF ASIA

ASIA is an immense continent, the largest in the ancient world; and, perhaps, nearly equal to Europe and Africa united. It is surrounded by sea through much the greater part of its outline, which, though broken by large gulfs and peninsulas, presents generally a huge unbroken mass, formed into a kind of irregular square. Its most northerly point is Cape Ceverovostochnoi, on the frozen confines of Siberia, in latitude about 77° N.; its most southerly is the terminating point of the Malayan peninsula, in about 2° N. To the east it terminates in East Cape, about longitude 170° W. from London; to the west in Cape Baba, the most westerly point of Asia Minor, in 26° E. long. On a general estimate, and omitting the most prominent points, we may state Asia at 6000 miles in length, and 4000 in breadth; which, supposing a regular figure, would give 24,000,000 square miles; but, in consideration of the many irregularities, a considerable deduction must be made.*

SECT. I.—*General Outline and Aspect.*

The boundaries of Asia are chiefly formed by the great oceans. On the north it has the Arctic or Frozen Ocean, which, for a great portion of the year, presents an unvaried expanse of ice and snow. To the east and south it faces the great Pacific, which separates it from America by almost half the breadth of the globe. On the south, however, this ocean is enclosed by the Oriental Islands, so as to form a gulf of vast dimensions, called the Indian Ocean. The western limit alone touches on the other continents, and constitutes a very varied line of land and sea. From the north, opposite to Nova Zembla, a chain of mountains, called the Urals, breaks the uniformity of the great northern steppes. From the termination of that chain to the river Don the line is somewhat vague; but thence, that river, the Black Sea, the straits connecting it with the Mediterranean, and the Mediterranean itself, form a distinct boundary. Asia is joined to Africa by the isthmus of Suez, and separated from it by the long canal of the Red Sea. The immense expanse of its territory presents every possible variety of site and climate, from the dreary confines of the polar world to the heart of the tropical regions. Every thing in Asia is on a vast scale; its mountains,

References to the Map of Asia.—West Part.

RUSSIAN EMPIRE.
1. Popova
2. Khatanska
3. Touroukhansk
4. Tazovskeia
5. Obdorskoi
6. Sobski
7. Beresov
8. Tarigarski
9. Samarov
10. Polimsk
11. Tourinsk
12. Suigutoi
13. Pirtchina
14. Narym
15. Parabelsk
16. Caynsk
17. Tomsk
18. Kolhyvane
19. Kouznetsk
20. Biysk
21. Semipalatyni
22. Barnaoul
23. Omsk
24. Tara
25. Issim
26. Tobolsk
27. Jaloutorovsk
28 Irbu
29. Kurgan
30. Orenburg
31. Fralskoi
32. Gourif
33. Tcherneiar
34. Asov
35. Ekaterinodar
36. Poti
37. Baku
38. Derbend
39. Kisliar
40. Astrachan
41. Konrad
42. Teflis.

TARTARY.
1. Tunkat
2. Tashkand
3. Koukan
4. Khojund
5. Samarcand
6. Bokara
7. Herat
8. Balk
9. Fyzabad
10. Cashgar
11. Yarkand
12. Leh, or Ladauk
13. Dras
14. Gortop
15. Khiva
16. Otrar.

CABUL.
1. Furrah
2. Bamian
3. Cabul
4. Attock
5. Cashmere
6. Lahore
7. Moultan
8. Khan
9. Dajel
10. Kulat
11. Siri Kila
12. Candahar.

HINDOSTAN.
1. Bisoly
2. Hardwara
3. Delhi
4. Bukka
5. Hydrabad
6. Pattan
7. Mandavie
8. Cambay
9. Oojein
10. Kotah
11. Ajimere
12. Agra
13. Allahabad
14. Oude
15. Patna
16. Malda
17. Bahar
18. Calcutta
19. Burwa
20. Sohnpoor
21. Cuttack
22. Sicacole
23. Nagpoor
24. Madera
25. Hindia
26. Aurungabad
27. Surat
28. Bombay
29. Goa
30. Beeder
31. Hydrabad
32. Vizagapatam
33. Ongole
34. Nellore
35. Madras
36. Arcot
37. Seringapatam
38. Calicut
39. Mangalore.

BELOOCHISTAN.
1. Reran
2. Pureg
3. Minab
4. Serek
5. Kedje
6. Punjoor
7. Khozdar
8. Bayla
9. Tatta.

PERSIA.
1. Tabreez
2. Resbd
3. Teheran
6. Kermanshah
7. Kashan
8. Semnaun
9. Bostam
10. Astrabad
11. Serukhs
12. Nishapore
13. Khanahoody
14. Neh
15. Kubbees
16. Yezd
17. Ispahan
18. Behuhan
19. Shiraz
20. Nukhilo
21. Forg
22. Kerman.

TURKEY.
1. Gounieh
2. Erseroum
3. Trebisond
4. Angora
5. Smyrna
6. Aiasalak
7. Akshehr
8. Aleppo
9. Ul Der
10. Damascus
11. Jerusalem
12. Anna
13. Mosul
14. Diarbekir
15. Van
16. Bagdad
17. Hillah.

ARABIA.
1. Akaba
2. Abou Zbee
3. Kalais
4. Hajar
5. Shoalabin
6. Shakra
7. Bussora
8. Katif
9. Khaibar
10. Yambo
11. Medina
12. Djar
13. Jedda
14. Mecca
15. Sherah
16. Kariatain
17. Temen
18. Yemama
19. Lasha
20. Sohar
21. Muscat
22. Kalhat
23. Harmin
24. Hasec
25. Dofar
26. Shibam
27. Keesm
28. Sahart
29. Aden
30. Mocha
31. Sana
32. Lobeia
33. Chamir
34. Saade
35. Tebaleh
36. Confodah.

Rivers and Lakes.
a Yenisei, R.
b Obi, R.
c Soomy, Lake
d Irtish, R.
e Charzalshan, Lake
f Issim, R.
g Tobol, R.
h Volga, R.
i Oxus, R.
j Sihon, R.
k Balkash
l Lake Nor Zaisan
m Koko Nor, Lake
n Sanpoo, R.
o Ganges, R.
p Indus, R.
q Helmund, R.
r Zerrah, Lake
s Euphrates, R.

* [The area is not far from 18,000,000 square miles.—AM. ED.]

its table-lands, its plains, its deserts. The grandest feature, and one which makes a complete section of the continent, is a chain of mountains, which, at various heights, and under various names, but with very little, if any, interruption, crosses Asia from the Mediterranean to the Eastern Sea. Taurus, Caucasus, and the Himalayah are the best known portions of this chain. On one side it has southern Asia, the finest and most extensive plain in the world, covered with the richest tropical products, watered by magnificent rivers proceeding from this great storehouse, and filled with populous nations and great empires. On the other side, this chain serves as a bulwark to the wide table-land of Thibet, which, though under the latitude of the south of Europe, has many of the characteristics of a northern region. To the north, the recent observations of Humboldt exhibit three parallel chains; the Kuenlun or Mooz Tagh, the Thianchan or Celestial Mountains, and the Altaïan. These also support table-lands; but not, it appears, so very elevated as has hitherto been supposed. They are not believed by that traveller generally to exceed 4000 or 5000 feet in height, and in many places enjoy a mild and temperate climate, yielding not only grain, but wine and silk. Elsewhere they are covered with rich pastures, and tenanted by numerous wandering races, at once pastoral and warlike, whose victorious bands have often over-run and subjugated the empires of the south. The Altaïan chain separates Middle Asia from Siberia; a long range of the bleakest land on the face of the earth. Some of the southern districts have been found by the Russians capable of supporting numerous herds of cattle; but the rest is abandoned to wild animals, not generally of a ferocious description, but by the beneficence of nature covered with rich and precious furs, which afford a great object for hunting and trade.

One grand feature of Middle Asia consists in large lakes or inland seas, salt like the ocean, receiving considerable rivers, and having no outlet. These are, the Caspian, the Aral, the Baikal, and several others of lesser magnitude. They are chiefly situated on the depressed and almost concave surface of Western Tartary, which, according to Humboldt, is 200 or 300 feet beneath the level of the sea; a sinking which he considers connected with the prodigious elevation of the regions to the eastward.*

No continent has so many rivers of the first magnitude, some of which yield in length of course only to the amazing waters of the New World. We may distinguish in Asia three systems of rivers; one, comprising the most distinguished and important streams, descends from the principal chain of mountains, fertilises the great southern empires, and falls into the Indian Ocean. The most remarkable streams of this class are the Euphrates, the Indus, the Ganges, and the Menam, or river of Siam. Again, from the parallel chain which separates Tartary from Siberia is another series of rivers, which direct their course to the Northern Ocean; the Obi, the Irtish, the Yeniseï, the Lena,—gloomy streams, of vast length; but flowing in this inhospitable region, and bound by almost perpetual frost, they afford little aid either to agriculture or to the intercourse of nations. A third system consists of the rivers which, rising in the high mountain centre of Asia, flow across the empire of China, to whose prosperity they mainly contribute, and fall into the Eastern Pacific. The Amour runs in the same direction through Northern Tartary, but without any profit to that barren district.

References to the Map of Asia.—East Part.

RUSSIAN EMPIRE.
1. St. Peter's
2. Bolcheretsk
3. Kamtschatka
4. Gavenki
5. Poostoretsk
6. Aklansk
7. Igigusk
8. Letovi
9. Verne Kolimskoi
10. Zachiversk
11. Maloi
12. Chanagar
13. Gighansk
14. Sivitanskoi
15. Habitations of the Tongousians
16. Olensk
17. Kantaskoi
18. Avansk oe
19. Troitskoi
20. Inbatskoie
21. Niz Tchoumskaia
22. Ilimpeiskaia
23. Eremo
24. Jakzimova
25. Yakoutsk
26. Almaskoe
27. Omekon
28. Yamsk
29. Okhotsk
30. Ondskoi
31. Prist Maiskaia
32. Amginskaia Slooboda
33. Volunskaia
34. Nerka
35. Tchadobsko
36. Lebedeva
37. Tanca
38. Yeniseisk
39. Krassoiyarsk
40. Savansk
41. N. Oudinsk
42. Biloiarskaia
43. Kirensk
44. Stanseova
45. Irkoutsk
46. V. Oudinsk
47. Nertchinsk.

CHINESE EMPIRE.
1. Outcham
2. Eken
3. Tondon
4. Sothin
5. Edou
6. Sagalin
7. Yaksa
8. Arounskoi
9. Merguen
10. Quanlin
11. Lefou
12. Nunganta
13. Kimhim
14. Litchin
15. Pinghay
16. Yoping
17. Kinkitao
18. Sicchan
19. Kirin Oula
20. Tchol
21. Bars Khotun
22. Karakum
23. Holio
24. Poro Hatu
25. Oniot
26. Chinyung
27. Peking
28. Cara
29. Concou
30. Pilouha
31. Campion
32. Onilo
33. Houpatar
34. Hami
35. Chatcheou
36. Silling
37. Kinyan
38. Yengan
39. Tayhuen
40. Shunte
41. Cay
42. Isinan
43. Lu
44. Cayfou
45. Pesutcheou
46. Homgan
47. Nankin
48. Ganlo
49. Nanyan
50. Kiaitcheou
51. Singanfou
52. Hantchou
53. Contchau
54. Longan
55. Contchoudsong
56. Suk
57. Choupatou
58. Tankerdsong
59. Tchintu
60. Tchonkin
61. Sianyan
62. Yotchea
63. Outchangfou
64. Hangtcheou
65. Nimpo
66. Koangsin
67. Nantchong
68. Shahoon
69. Eutchea
70. Canton
71. Kigan
72. Kielei
73. Tongin
74. Senan
75. Koeyan
76. Mahu
77. Yunnan
78. Cayhoa
79. Pinlo
80. Shtwkin
81. Outchuenbien
82. Lieutcheoufou
83. Seminfou
84. Tali
85. Lassa.

BIRMAN EMPIRE, &c.
1. Gergonge
2. Santafou
3. Kientone
4. Ummerapoora
5. Ava
6. Aracan
7. Pagahm Mew
8. Meeaday
9. Pegu
10. Rangoon
11. Martaban
12. Zeme
13. Laung
14. Sandepora
15. Boating
16. Longan
17. Nhiatrang
18. Saigon City
19. Cancao
20. Cambodia
21. Siam
22. Mergue
23. Tenasserim
24. Bondelon
25. Palani
26. Queda
27. Malacca.

PHILIPPINE ISLANDS.
Magindanao.
1. Cagayan
2. Mindanao.

Luzon.
1. Badoc
2. Manilla
3. Manbulao.

JAPAN ISLANDS.
Niphon.
1. Nabo
2. Jedo
3. Osaka.

Rivers and Lakes.
a Yenisei, R.
b Tongouska, R.
c Piacina, R.
d Anabara, R.
e Olensk, R.
f Lena, R.
g Indigirka, R.
h Kolima, R.
i Aldan, R.
j Olekma, R.
k Lake Baikal
l Amour, R.
m Songari, R.
n Hoang Ho, R.
o Kiang Ho, R.
p Particho, R.
q Aracan, R.
r Irawaddy, R.
s Cambodia, R.

*[Recent observations have rendered the supposed great depression of the Caspian basin, at least extremely doubtful.—Am. Ed.]

Lastly, the Jaxartes, the Oxus, and others of great magnitude, though secondary to the above, flow along the great plains of Western Tartary; but, unable to reach the ocean, expand into the Aral, the Caspian, and other inland seas.

Asia, besides its vastness, as a continent, is distinguished by its archipelagoes of islands, of an extent sufficient to constitute kingdoms. Such are those of Java, Sumatra, Borneo, and the Philippines, which, with many smaller ones, comprise the Oriental Archipelago, distinguished by its brilliant metallic products and rich spices; and exhibiting a singular mixture of barbarism and civilization. The two contiguous islands of Japan comprise a state dignified with the title of empire. Ceylon, bordering on the extremity of Hindostan, almost rivals the beauty and fertility of that celebrated region. We do not here include under Asia those huge insular masses, New Holland, New Zealand, &c., which have of late received the name of an Australian continent; nor the endless groups scattered over the Pacific, and which have also, with somewhat questionable precision, been made a separate quarter, under the title of Polynesia.

SECT. II.—*Natural Geography.*

SUBSECT. 1.—*Geology.*

The Geology of Asia, having never been examined in a systematic manner, or by scientific observers, does not admit of any delineation that could be creditable to this work, or satisfactory to the public. Some details will be given in subsequent chapters in regard to those countries concerning which we are in possession of accurate data.

SUBSECT. 2.—*Botany.*

The arrangement adopted for describing the Asiatic territories gives us an excellent opportunity of noticing, in conjunction with the botany of the western provinces of Asia, a general sketch of that to which we before alluded (I. 296.) as the Temperate Transition Zone, and of which the quarter of the globe under consideration occupies so large and so important a portion. This we do the more readily, because our limited space obliges us to enter into but few particulars relative to the vegetation of the respective countries themselves; and because it is in this point of view that Mirbel has so admirably described the geographical distribution of the plants of the Old World.

We come to treat, then, of that western portion of the old continent which is separated from the eastern by the vast chain of mountains of Himalayah and Thibet.

An irregular line, traced from west to east, commencing at Mogadore, and reaching to the Hydraotes of Alexander (the Rauvee of modern authors, one of the sources of the Indus,) and which in this vast extent would pass along the crests of Atlas, near Cairo, by the summit of Mount Tabor, Bagdad, Shiraz, Kelat, and Moultan, might thus represent, pretty accurately, the southern or inferior limit of this zone. The Olive seems, of all trees belonging to the zone, to indicate most accurately its northern limit. As we proceed towards the north, the olive languishes, and at last ceases to grow. Its disappearance is an indication of a remarkable and general change in the vegetation; or, in other words, of the passage from the transition to the temperate zone.

The Olive, which no longer exists between lat. 42° and 43° in Spain, between 44° and 45° in the southern departments of the east of France, between 45° and 46° in the east of Italy and Carniola, does not extend beyond 40° upon the eastern coast of Greece and the western shores of Asia Minor. It is said to grow on the coasts of Macedonia, but is not seen anywhere about the Sea of Marmora. Again it reappears at Sinope, and follows the shores of the Black Sea, as far as Gourieh. It is seen in lat. 45°, in the southern part of the Crimea, and a degree lower down, on the west of the Caspian; the river Terek marking the limits of its progress. In Mazanderan the Olive abounds; but no traveller has noticed its existence in the immense countries of Persia and Tartary, between the Caspian Sea and the chain of the mountains of Beloot. Elphinstone has observed it in 34° and 35°, upon the hills which constitute the lower steps of the Caucasus: but it is unknown to the east of Cabul.

The mean annual temperature of the plains in this zone, for the lower boundary, is estimated by M. Mirbel at + 22° to 23° of Reaumur; for the higher boundary at + 14°.

In the Mediterranean portions of this district there are at least *six* herbaceous for *one* woody species of plants; and the proportion of herbaceous to woody plants proceeds in an increased ratio to the hyperborean regions, where *twenty-six* herbaceous plants (for the most part with perennial roots) are reckoned to *one* shrub. The number of trees in the Mediterranean flora is not much under 240: there are about seventy-five in the Temperate Zone, and but twenty-seven to thirty in the Transition Arctic Zone.

The greater part of the trees, shrubs, and under-shrubs of the Equatorial Zone are never entirely divested of their foliage. The same holds good with about 300 of those in the Mediterranean flora, or a quarter of the whole of its ligneous vegetation. The Temperate

Zone, again, has but forty species with persistent leaves, the Arctic Transition Zone about twenty-four, and the southern limit of the Arctic Zone ten at the utmost.

In the Mediterranean district of the Temperate Transition Zone, the Compositæ and the Leguminosæ are the most numerous families: indeed, they alone constitute one-fourth of the whole vegetation. Then come the Cruciferæ, Gramineæ, Labiatæ, Caryophylleæ, and Umbelliferæ; afterwards the Scrophularineæ, Rosaceæ, Boragineæ, Ranunculaceæ, and Cyperaceæ; finally, the Liliaceæ. It may be remarked, that the Compositæ, Cruciferæ, Labiatæ, Caryophylleæ, Umbelliferæ, Rosaceæ, Ranunculaceæ, and Cisteæ, with some other families, present, in the Temperate Transition Zone, a greater number of specific types than anywhere else. The chief part of the species of these families that are found in equatorial regions inhabit there the valleys and the mountains; thus proving that the violent and continued heats of the plains are uncongenial to their nature.

Those families of plants which hold the most important rank among the productions of the Temperate Transition Zone, whether because they contribute the loftiest of those trees which clothe the mountain's side, or because they furnish those individuals of middling stature which delight to grow on the hills, with the branching shrubs which form the hedges, and the low woody plants whose rough and stunted growth overspreads the uncultured plains, are, in the first place, the Amentaceæ and the Coniferæ (which alone compose more than half of the arborescent vegetation), and next the Rosaceæ, Leguminosæ, Terebinthaceæ, Thamneæ, Jasmineæ, Caprifoliaceæ, Cisteæ, Ericineæ, and Labiatæ.

But what gives the Transition Zone its peculiar character is the combination of those species which may be considered as belonging to three different regions; that is, the vegetation of the equatorial districts, that of the northern, and the growth which is peculiar to the countries situated between the 30th or 32d, and the 44th and 45th parallels. The first is seen in its decline, the second in its commencement, and the third in its full perfection. The latter occupies the greater portion of the soil; the two others form, here and there, colonies more or less flourishing in proportion to their vicinity to the parent land. The Date tree, the Latanier (*Latania?*) and even the Doum* (*fig.* 522.) (if it be true that it grows in Galilee), the Sugar-cane, the Sorgho† (*fig.* 523), the Agave, the Cactus Opuntia or prickly pear, the Orange and Lemon trees, the Asclepias gigantea and other arborescent Apocineæ, several African and Asiatic Mimosas and Acacias, confined to the favourably situated plains: these represent the vegetation of the equatorial plains. That of the northern countries may be observed on the mountains, and consists in the common Oak, the Ash, the Alder, the Hornbeam (*Carpinus orientalis* Lamarck), the Beech, the Birch, the Yew, the common Fir, the yew-leaved Fir, the Scotch Fir, &c. As to the vegetation of the transition zone, it bears some features of similiarity to the two others, without, however, being confounded with them. The Fig, the Mulberry, the Liquidambar, the Walnut, the Pistachio, the Lentisk, the Terebinth, the Rhus, the Olive, the Myrtle, the Pomegranate, the Syringa, the Storax, the Sweet Bay, the Tamarisk, the Diospyros, the Mimosa Julibrissin, the Carob tree, the Judas tree, the Oleander, the Evergreen Oaks, &c.; these create no disparity among the equatorial vegetation. The deciduous-leaved Oaks; the

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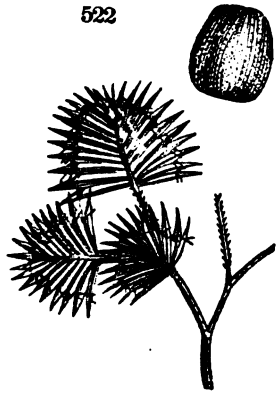

The Doum.

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The Sorgho.

* The Crucifera thebaica. This tree is much prized in the countries where it abounds. "A native of the desert," says M. Delile, "its shelter renders many places, that would otherwise be totally waste, capable of cultivation. Many species of thorny sensitive plants, which rarely grow in the spots watered by the Nile, find an asylum under its shadow; they increase there; and, spreading in the direction of the desert, limit its extent by augmenting the productive districts. The trunk of the Doum is composed of longitudinal parallel fibres, similar to that of the Date, but much stronger and closer. It is cut into planks, which are used for doors in Upper Egypt; the fibres are black, and the intermediate pith is yellow. The leaves are used for making carpets, bags, and baskets of various kinds: the pulp of the fruit is pleasant to the taste, and would be much used for food, if it were not for the numerous fibres with which it is mixed; still the inhabitants of Saïd, or Upper Egypt, do frequently eat it. The fruit is sold in large quantities, and very cheap, at Cairo, where it is rather considered as a useful medicine than an article of food: it tastes like gingerbread, and is much relished by the children. An infusion, something like the drink made of steeped liquorice-root, or the pods of the *Carob tree*, is prepared from the fruit, which, before maturity, contains a clear and tasteless fluid. When ripe, the kernel becomes very hard, and fine beads for rosaries are made of it, as it takes a beautiful polish."

† This plant, the Holcus Sorghum of Linnæus, is one of the most valuable of all the Cerealia. It is extensively cultivated in Egypt, where three harvests of it are gathered every year. According to Vahl, it is identical with the Holcus Durra of Forskäl, which is commonly called Durra by the Arabs and Egyptians.

Junipers, which attain a height equal to that of some trees; the Aleppo Pine, the Stone Pine, the Corsican Pine, the Oriental Spruce (*Abies orientalis*), the Apricot, Peach, and Quince Trees, with other arborescent Rosaceæ which we cultivate in our orchards, and which form forests in Cabulistan and Asia Minor, bear a considerable analogy with the wild vegetation of our own countries.

SUBSECT. 3.—*Zoology.*

The Zoology of this great division of the earth is as vast as the climate of the regions it comprehends is diversified. Inhabited by nations jealous and superstitious, or lawless and barbaric, obstacles of no ordinary difficulty have long debarred the European from a full investigation of those productions of nature characteristic of the Asiatic continent. That intellectual developement which leads the Caucasian to discern his God, and adore his Creator in the contemplation of his works, does not appear in the Mongolian, a race long sunk in gross idolatry and in a senseless superstition on the divinity of perishable beasts. Hence it is, that the interior of China and Thibet, those vast regions forming the centre of Asia, have never been trodden by the naturalist or the man of science. The few and very imperfect ideas, therefore, that can be formed of their zoology, have been merely gathered from partial gleanings made on the confines of European India, and of the neighbouring provinces. From such scanty materials we can frame no remarks, approaching to that precision with which we have noticed the zoology of Europe; although they are still sufficient to furnish a few interesting observations of a general nature.

The principal divisions of Asiatic zoology, indicated both by the geographic features of the continent, and by the nature of their respective animals, are properly three. The *first* commences from the polar regions, and includes the whole of Asiatic Russia. The natural boundaries of this region, on the west, are the Ural mountains, while its southern extremity is marked with equal precision, by the lofty Altaïan chain; the cradle, as it has been termed, of the Mongolian race. The *second* great division, as we have already intimated, comprehends the little known empires of China, Japan, Thibet, the Tartaric provinces bordering on Persia, and the eastern shores of the Caspian Sea. The stupendous mountains constituting the Himalayan chain appear to form a natural boundary to this intermediate region. Under the *third* division we comprise the greater portion of Hindostan and Malacca, together with Java, Sumatra, and such islands as, by their situations, lie contiguous to the continent, and by their productions exhibit the characteristics of Indian zoology, blended in some degree with that of Australia. In this arrangement we have omitted the whole of Asia Minor, and the nations about the Caucasian mountains; because, so far as the productions of these regions are known, they assimilate closely to those of Europe; yet Persia appears to possess many animals of Asia, and this country may possibly present a union of the two faunas.

Of the first, or northern Asiatic division, our zoological information has been almost entirely furnished by the researches of Pallas, one of the greatest naturalists of the age. The shores of the Icy Sea do not, however, appear to exhibit any existing animals essentially different, in genera or species, from those common to Arctic Europe. Neither are the frozen regions and arid *steppes* of Siberia congenial to the abundance or increase of more than a few species. Such, nevertheless, as appear adapted, by their structure or economy, to inhabit these wastes, are curious and interesting; and present to the naturalist many forms, either rare in European Russia, or unknown to the westward of the Ural mountains. As we approach the Caspian Sea and the confines of Persia, a mixed fauna becomes evident: for, while many of the species are unknown to Europe, they belong, for the most part, to the same natural groups, rather than to such as are more peculiarly Asiatic: on the other hand, the Caspian Tern (*fig.* 524.), and numerous other birds, identically the same with our own, are found in abundance on the shores of the Caspian Sea. Hence it appears not improbable that the western zoology of Asia and of the European regions meet together, and lose their distinguishing features, in the countries bordering upon these territories.

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Caspian Tern.

In regard to Central Asia, forming the second zoological division, we have already intimated how scanty has been the information supplied for its elucidation. It is, indeed, so meagre, that we may possibly be censured for intimating a marked difference, without being prepared fully to explain its nature. Yet, if we consider the great elevation of the central table-land, its sandy and barren soil, when compared with the rich vegetation of southern India; and its warm temperature, as opposed to that of Siberia, every principle of analogy leads to the supposition that its productions must be peculiar; and that these extensive regions must be inhabited by animals with habits and structures adapted for such situations. Nor is this belief unsupported by facts. Central Asia is remarkable for a peculiar and a very distinct species of horse, called the Dziggtai, or *Equus Hemionus* of Pallas; a most extraordinary animal, which we shall subsequently notice. The same countries are also named

as the metropolis of a peculiar species of Argali, or sheep (*Ovis Ammon*) (*fig.* 525.), although its range appears extended both to Siberia and the Caucasus. It is also probable that the Arnee buffalo, and another gigantic animal of this genus mentioned by Major Smith as found only on the sides of the Himalayan mountains, may more correctly belong to the zoology of Central Asia. The mountains of Thibet and Boutan offer the principal asylum to another indigenous quadruped of large size, called the Tartaric or yak ox (*Bos Poëphagus*). If so many quadrupeds, of the first magnitude in their respective families, are inhabitants of these central regions, how many others, less calculated to excite the notice of travellers, must still remain in obscurity!

The birds of the central division are scarcely known, except from the paintings of the Chinese. Many of the representations given by their best artists are sufficiently accurate to enable us immediately to recognise well-known species; so that much confidence may generally be reposed in the existence of such as have not yet been seen by Europeans. These drawings are numerous in this country, and frequently represent large and beautiful pheasants, totally distinct from such as occur in southern India. We have before observed, that Asia is chiefly remarkable for the variety and brilliancy of its gallinaceous birds; and that most of these, like the *Lophophorus refulgens* Tem. (*fig.* 526.), and other allied species, are only found in the mountainous and elevated provinces of the interior. Upon the whole, therefore, it seems highly probable that these inland regions may be the chief metropolis of many peculiar birds, unknown to the northern and southern extremities of the continent.

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Argali.

526

Lophophorus Refulgens.

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Long-armed Ape.

The third division, comprising southern India, presents a zoology of great richness and peculiarity. The excessive heat of the climate, the lower and consequently more humid nature of the plains, are equally favourable to an exuberant luxuriance of vegetation, and to the increase of animal life. It is here, consequently, that we meet with numerous animals of a large size, and others of rapacious ferocity. Troops of the Asiatic elephant, with wild boars, buffaloes, and antelopes, among the herbaceous tribes, abound; while the woods and jungles give shelter to more ferocious animals, which, in spite of increasing population, still retain their ancient possessions. Among these the great tiger of Bengal stands foremost; while panthers, leopards, lynxes, hyænas, and jackals appear to swarm in the less cultivated districts. The one-horned rhinoceros is still a common inhabitant of the swampy banks of the great rivers. But this portion of Asia is chiefly characterised as being the native region of those large apes, which the credulity of early travellers metamorphosed into wild men, and which some modern naturalists would persuade us form part of the same order as that to which we ourselves belong. Various species of these disgusting caricatures of the human shape are scattered in the southern extremities of the two great peninsulas of Hindostan and Malacca; but their chief metropolis is in Java, Sumatra, Borneo, and such islands as lie on the southern confines of the Asiatic division, and towards the northern limits of Australia. The Gibbons, or long-armed apes (*fig.* 527.), are of a milder nature. The African apes, equally large with the ouran outang, but marked by distinguishing characteristics, occur nearly in the same parallels of latitude. These species will be subsequently noticed in the details of those countries to which they more particularly belong.

The birds of southern Asia, but more particularly those of the Indian islands, have already claimed our attention: it will therefore be sufficient merely to notice such groups as appear most striking on the continent of India. The ring-necked Parrakeets (*fig.* 528.) are peculiar to these latitudes, and present a lovely group of birds, uniting a form of exquisite grace with the most delicate and chaste tone of colouring: nearly all the species are marked by a

jet black collar round the neck. Towards the mountains of Nepal, General Hardwicke discovered a bird of this family fully equal in size to a South American Maccaw, and apparently belonging to the same group. Many of the short-tailed Parrots are eminently beautiful; and one, the Vernal Parrot (Swains. *Zool. Illus.*, 2d series, No. 1.) is not larger than a sparrow. Various species of Hornbills congregate in large flocks, and are scattered throughout this part of India; the grotesque form of their large bills, generally furnished with a singular-shaped casque or horn, is very remarkable. The nectar of innumerable odoriferous plants affords nourishment to a variety of splendid little birds, of the richest and most dazzling plumage: these compose the genus *Cinnyris*, and represent, in the Old World, the humming-birds of the New. The Drongo Shrikes are more numerous in India than in Africa: living solely upon insects, which they catch upon the wing, somewhat in the manner of swallows: they contribute to check the increase of insects, probably as effectually as do the Tyrant Shrikes, peculiarly appropriated to the New World. The smaller birds of India, particularly among the insectivorous families, are very imperfectly known; several belong to groups scattered both in Europe and Africa; yet future research will no doubt bring to light many others, peculiarly Asiatic. The genus *Gryllivora* among the *Saxicolæ* or Stonechat Warblers, in its typical examples, may probably be of this description. The Scansorial Birds, both of the continent and islands, are numerous and beautiful. Among these, the Woodpeckers offer nothing to distinguish them, geographically or generally, from those of other regions. But the true Barbuts, connecting in some degree these latter with the Parrots, are exclusively Asiatic, and abound in such districts as border upon the equator. This singular race of birds, which climb trees with all the agility of the Woodpeckers, are represented in Africa by the genus *Pogonias*, or the Tooth-billed Barbuts; while in the American islands, beneath the equator, we find a third group, distinct in their structure from either. In proportion as we trace the Ornithology of Asia southward, we find it teem with increased interest. It is from the luxuriant islands of the Indian Archipelago that the large Cockatoos of a snowy whiteness have been brought to Europe; while another, perfectly black, *Microglossus aterrimus* Vieil. (*fig.* 529.), inhabits the same region. Yet far more beautiful than these are the graceful and brilliant-coloured Lories, of which numerous species have been detected in the southern extremity of Malacca, and on the neighbouring islands, particularly those of Molucca.

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Ring-necked Parrakeet.

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Black-Cockatoo.

The Rapacious Birds appear to be much fewer in Southern Asia than in any region of equal extent, either of Africa or America. This inequality may possibly arise from the insufficiency of our knowledge, and the inattention of travellers to the subject; yet there are strong grounds for believing that the comparative paucity of this destructive order is one of the peculiarities of Asiatic zoology. Out of twenty-five sub-genera, under which some modern ornithologists arrange the numerous tribe of Falcons, there appears but one (*Hierax*), and that containing but a single species, (*Hierax cærulescens*) (*fig.* 530.), or Little Falcon, which is characteristic of Asia: it is so diminutive as scarcely to exceed the size of a sparrow. The whole of the remaining Falcons, hitherto discovered in these regions, belong to such groups as are common to Europe and Africa. On the other hand, when we consider the number and ferocity of the carnivorous quadrupeds, we may be led to conclude that Nature has assigned to them, as being more efficient agents, the office of keeping down the redundance of smaller animals, which in other countries is nearly the exclusive province of the birds of prey. A glance at the zoology of the New World strongly favours this supposition. The largest and most formidable rapacious birds in existence, are all exclusive natives of the New World. Out of the twenty-five sub-genera already alluded to, more than one-half are peculiar to the continent of America: and although the same numerical superiority is not apparent in the species of the vulture tribe, the deficiency appears made up by numerical quantity. We never met with more than two species of vulture during our travels in Brazil; yet these were in such numbers

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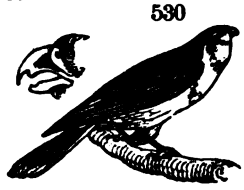
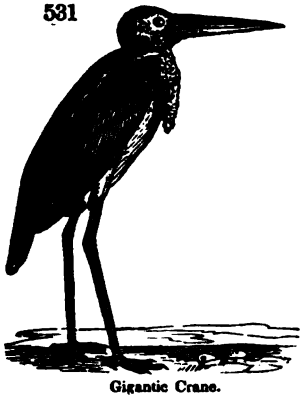


Little Falcon.

that a dead animal could not remain an hour without being discerned and surrounded by these scavengers of nature. The carnivorous quadrupeds of the New World, although not in species, yet in numerical amount, are remarkably few: while the absence of Antelopes, Buffaloes, Wild Hogs, and other large game, so necessary in Asia for the support of its ferocious animals, is a further argument to strengthen this belief; namely, that the distribution of rapacious animals, in the two hemispheres, is balanced by contrarieties.

531



Gigantic Crane.

The Rapacious Wading Birds of India must not, however, be omitted. We apply this term to the numerous family of Herons; which certainly represent, among wading birds, the Vultures and Falcons properly so called. The Gigantic Crane (*fig.* 531.). Ardea Argala *Lath.* (under which name, more than two species have evidently been confounded), in its uncommon voracity, and in the nature of its food, is completely a bird of prey. It is sufficiently high to appear, when walking, like a naked Indian. As a proof of its amazing voracity, it has been mentioned, that in the craw of one was found a land tortoise ten inches long, and a large male black cat, entire, in the stomach! (Lath. *Hist.*, ix. 39.) The rainy season, in India, is always preceded by the arrival of these and other cranes and herons, in great numbers; and the destruction they must create, not only among fish, but land reptiles of every description, is so well known to and appreciated by the natives, that they hold these birds in great estimation.

Of the Reptiles of India little need be said. In the rivers are found large crocodiles, of different species from those of Africa. The serpents are numerous, and many are of the most deadly nature: the Coluber Lebelinus *Lin.* is said to destroy the person bitten, by causing an unconquerable and deadly sleep; it is of a small size, hardly more than an inch and a half long. The serpents of British India have been ably illustrated by Dr. Russell. The islands are inhabited by others of a tremendous size; as the great Pithon, long considered the same with the *Boa constrictor* of the New World. The Chameleons are natives of India no less than of Africa, and are now known to comprise several species. One of the most remarkable reptiles yet discovered is probably the *Draco volans L.*, or Flying Dragon (*fig.* 532.); from which, perhaps, the fabulous writers of antiquity derived their notion of the formidable monster figured in old books. This, however, is a small and inoffensive little animal; distinguished from the lizard tribe by having on each side of the body a broad membrane, like a wing, strengthened by bony processes: it wanders about trees in search of insects, and is thus enabled to spring from bough to bough, and support itself a few minutes in the air. (Shaw, *Nat. Mis.*) Another lizard, of a large size, and, from its delicate flavour, much esteemed as food, is found in Amboyna (*Lacerta amboynensis* L.). The celebrated hooded snake, or Cobra de Capello (*Naia tripudians* Merr.), is peculiar to India, and with other species is well known to be tamed by the Indian jugglers. Such appear to be the most remarkable reptiles of the Asiatic region: many others might be enumerated; but so little has been done towards the elucidation of their geographic range, that nothing can be stated sufficient to interest the general reader.

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Flying Dragon.

The Native Ichthyology of Asia, from the number, the variety, and the singularity of its groups, is perhaps richer than that of any other part of the world. Our limits will not, however, permit a long enumeration of names. Many of the Ray fish grow to an enormous size, and are so formidable to the pearl divers, as frequently to attack and injure them when under water. Nothing can surpass the elegant markings, or the beautiful colours, which adorn the tribe of Chætodons, and the numerous Labri, of these seas. The Ganges and the other great rivers are inhabited by many peculiar Siluri, or Cat-fish; and it is from China that we derive the beautiful gold and silver fish now so completely naturalised in western regions.

Among the Insects are many which in magnitude and splendour vie with those of the New World, particularly the true Papilionidæ, or butterflies, among lepidopterous insects, and the family of Buprestis, in the coleopterous order. Yet, upon the whole, judging from such collections as have been brought to Europe, we have no hesitation in claiming for tropical America a decided superiority in the number, variety, and magnificence of her insect

productions. The Scarabæus Atlas (*fig.* 533.), or Atlas beetle, of Fabricius, near five inches long, from its size and singularity of shape is among the most remarkable of the Asiatic beetles. The splendid green and gold *Buprestis vittata*, with many others of equal size and beauty, are so much admired by the Chinese, that they are kept in cages, when alive, in their rooms; and, when dead, are used as ornaments for dress. Among the numerous butterflies, the names alone of Papilio Priamus, Ulysses, Polymnestor, Panthous, and Octavius will remind the entomologists of insects they have long sighed to possess, as fit companions to the equally superb, though now more attainable, butterflies of Brazil. It is remarkable that Asia appears originally to have furnished us with the greatest proportion of those animals so eminently useful to man, either in a state of domestication, or, as contributing, in other respects, to his comfort or luxury. The domestic fowl and the peacock, among birds, are natural inhabitants of this part of the world: all the varieties of the silkworm must be added to the list: one species alone has been introduced into Europe, but the natives cultivate several others, from which are made garments less fine in texture, but much more durable, than those fabricated from the common silkworm. It appears, according to the observations of Dr. Horsefield, that in Java, and probably in most parts of India, the Ants are the universal destroyers and removers of all useless or decayed matter, whether vegetable or animal. This is precisely the case both in tropical Africa and America, and at once accounts for the scarcity of those families of Beetles which are appointed to perform such offices in more temperate regions.

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Atlas Beetle.

Of the radiated and other marine animals we have no other accounts than mere names of species. The Cuttlefish of the Indian seas are said to be sometimes so large as to attack the pearl divers, and strangle them in the serpent folds of their arm-like feet. We by no means think this account is devoid of truth; for, even in the temperate regions of Europe, we have been frequently assured, by the Sicilian fishermen, that these animals instinctively cling to living bodies that come in their way, and that many instances have occurred among the coral divers, where life has been thus endangered. We have ourselves seen an undescribed species, not uncommon on the coast of Messina, whose arms were much thicker than the wrist of an ordinary man; this species is equally dreaded by the Sicilian mariners, although, on account of its delicate taste, it is sought after, and much prized, as an article of food.

The Conchology of the Indian seas is the most splendid, profuse, and varied of any division of the world; and forms a remarkable contrast to that of America. When we compare the marine shells of the West Indian seas with those inhabiting the same degrees of latitude in the Oriental Archipelago, the proportion of species in the former is probably not greater than one to six. This fact, which has never, we believe, been observed, furnishes a most interesting subject of enquiry to travellers, who, like the illustrious Humboldt, contemplate those mighty causes which influence the grand operations of nature. On looking to the habits of these testaceous mollusca, we find that nearly three-fourths are carnivorous; that is, of shell-fish which, like the rapacious quadrupeds on the continent, derive their sole nourishment from attacking and devouring other animals. The conchologist will immediately perceive we advert to the genera Conus, Oliva, Voluta, Mitra, Cypræ, Harpa, Turbinella, Dolium, Cassis, and several others; of which very few species have been found beyond the geographic limits of the great Indian Ocean. Of the numerous and highly prized Cones, a genus containing near 200 species, not more, perhaps, than 10 may be reckoned strangers to Asia. Lamarck enumerates 62 species of Olivas, and of these only *two* have been discovered in other parts of the world. The extensive family of Mitranæ *Sw.* or Mitres, are distributed much in the same proportion; while that of the Volutes, containing near 60 species, exhibits but three as natives of Africa, and one only of America. The Acephala, or Bivalve shells, as in most other countries, appear to be fewer both in number and variety; yet in neither of these two great divisions are we acquainted with more than three or four species identically the same with those found in the European seas. Among such as are peculiar to Asia may be mentioned the Hammer-shaped Oysters (*Malleus* Lam.). These, as Dr. Horsefield informs us, are found in profusion, adhering to the submarine rocks, on certain parts of the Javanese coast. The Pearl Oysters are abundant in similar situations, and, when large, furnish that beautiful substance called mother-of-pearl. But the most remarkable bivalve in point of size, in the whole world, is the Tridacna gigas (*fig.* 534.), of which the valves sometimes exceed four feet in length, and, with the animal, is of the enormous weight of 500

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Tridacna Gigas.

lbs.; it adheres to rocks by such a strong byssus or ligament, that it can only be separated by a hatchet; the cartilage of the hinge, when cut and polished, is so beautifully iridescent as nearly to rival the opal.

The paucity of the Fluviatile Bivalves, apparently throughout Asia, is another singular feature in its conchology. The rivers, in number and magnitude, are scarcely inferior to those of the New World; yet, hitherto, they have not furnished more than six or seven species to our cabinets. We can scarcely believe that this deficiency originates in the neglect of collectors: for the shells of no one region have been more sought after than those of India; yet America alone produces near 100 species, or well marked varieties, of this family.

The herbaceous land shells, likewise, appear very sparingly distributed in the Eastern world; yet several belong to natural genera not met with elsewhere. The genus *Scarabus* seems peculiar to New Guinea and some of the adjacent islands; and that of *Onchidium* (*fig.* 535.), among the slugs, or shelless Mollusca, is remarkable. The Oriental pearl-fisheries are well known to produce great wealth. Mr. Percival, in his account of Ceylon, has given much interesting information on this subject, which will be again adverted to when treating of that island.

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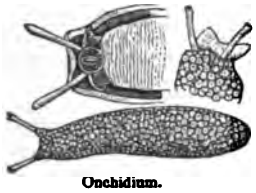


Onchidium.

The domestic animals are more numerous than those of Europe. The universal use of the horse and the ox as beasts of burden is rendered unnecessary by the superior strength and sagacity of the elephant. In those provinces which adjoin Persia, the Camel and Dromedary are in common use, while the Buffalo is chiefly employed for agricultural purposes. The large Indian oxen are of a different race from those of Europe, having a hunch or lump upon the back, which sometimes weighs near fifty pounds: the horns are short, and bent backwards, and the colour of the hide is usually red or brown. These oxen are remarkable for other peculiarities: they have, in all their motions, a superior liveliness and activity to those of Europe. Their voice is also different, producing a groaning sound, somewhat weak, but shrill.

The genera of quadrupeds belonging to this division of the world will illustrate the preceding remarks; and will better exhibit how much its zoology, in this department of natural history, differs from that of Europe.

Genera and Sub-genera.	No. of Species.
(Apes, Baboons, and Monkeys.)	
Simia	2
Hylobates	5
Prosbitis	1
Lasiopyga	1
Nasalis	1
Semnopithecus	5
Cercopithecus	2
Cercocebus	4
Cynocephalus	1
Papio	
Strepsa	1
Nycticebus	3
Tarsius	2
(Bats.)	
Megaderma	1
Rinolphus	8
Nycteris	1

Genera and Sub-genera.	No. of Species.
Plecotus	1
Vespertilio	6
Nyctinomus	3
Cheiromeles	1
Pteropus	9
Cephalotes	2
Sorex	1
Tupaia	3
Ursus	3
Rutellus	1
Putorius	4
Martes	1
Mephites	1
Lutra	2
Vulpes	2
Viverra	1
Genetta	4
Mangusta	9

Genera and Sub-genera.	No. of Species.
Paradoxurus	2
Prionodon	2
Felis	10
Lynx	3
Phalangista	3
Arvicola	7
Georychus	4
Mus	11
Cricetus	4
Dipus	4
Gerbillus	2
Aspalax	1
Sciurus	15
Pteromys	6
Hystrix	2
Lepus	2
Lagomys	1
Munis	1
Elephas	1

Genera and Sub-genera.	No. of Species.
Sus	1
Equus	1
(Ruminants.)	
Camelus	2
Moschus	5
Elaphus	9
Axis	3
Capriolus	1
Stylocerus	3
Aigocerus	2
Gazella	2
Raphicerus	2
Tetracerus	2
Nemorhedus	3
Capra	2
Ovis	1
Portax	1
Bubalus	2
Bison	3

Among the genera of birds more particularly belonging to Asia, the following may be mentioned: yet, in the present unsettled state of specific ornithology, it is impossible to estimate the number of species they may respectively contain.

Birds of Prey.	Analcipus *Sw.*	Gryllivora *Sw.*	Crypsirina *Vieil.*	Orthotomus *Horsf.*	Ptilophorus *Sw.*
Hierax *Vig.*	Ocypterus *Cuv.*	Calyptomena *Raf.*	Paradisea *Lin.*	Phœnicophaus *Vieil.*	Pavo *L.*
	Irena *Horsf.*	Mirafra *Horsf.*	Epimachus *Cuv.*	Cinnyris *Cuv.*	Polyplectron *Tem.*
Passerines.	Phœnicornis *Sw.*	Pyralauda *Sw.*	Ptyctolophus *Vieil.*	Pomatorhinus *Horsf.*	Gallus
Nyctiornis *Sw.*	Timalia *Horsf.*	Vidua *Cuv.*	Microglossum *Geoff.*		Lophophorus *Tem.*
Macropteryx *Sw.*	Iora *Horsf.*	Amadina *Sw.*	Paleornis *Vig.*	*Gallinaceous Birds.*	Phasianus *L.*
	Brachypteryx *Horsf.*	Estrilda *Sw.*	Lorius *Brisson.*	Vinago *Cuv.*	Argus *Tem.*
Dentirostres.	Prinia *Horsf.*	Lamprotornis *Tem.*	Picumnus *Tem.*	Ptilonopus *Sw.*	
Eurylaimus *Horsf.*	Enicurus *Horsf.*	Gracula *Lin.*			

Sect. III.—*Historical View of Asia.*

Viewed in an historical light, Asia, to the south of the great ridge of mountains, has been always a wealthy and populous region, the earliest seat of civilization, and of those great monarchies which, absorbing into one a number of the small original communities, openly aimed at universal empire. The revolutions of Western Asia were alone known to the Greeks; and here the lead was successively taken by Assyria, Babylon, Persia. This last empire, extending far beyond the dimensions of the others, included Egypt and part of India, to which Xerxes in vain attempted to add Greece. On the contrary, the Greeks became, under Alexander, the conquerors of all the regions over which the Persian sway had extended. All the activity of this great prince, however, and of the learned men who accompanied him, obtained only very imperfect ideas of the extent of Asia, and of the nations

which composed it. India was still deemed the most eastern country of the world. The ocean which terminated Asia to the north was imagined to run along the head of the Caspian, then regarded as one of its gulfs; and thence in nearly a direct line to the Ganges, which was represented as falling into the Eastern Ocean. This line cut off all Siberia, Eastern Tartary, and China, nearly two-thirds of the entire continent. Thus Europe was at this time considered as larger than Asia. Ptolemy, by means of the caravan merchants, who supplied Rome with the luxuries of the East, obtained more correct and enlarged views. He learned the existence of China, and could estimate the extent of Asia eastward; but was unable to penetrate the Altai, or gain any knowledge of the frozen regions of Siberia. The Roman empire, and the states of modern Europe, were soon involved in darkness by the irruption of the barbarous nations, and lost even the knowledge already acquired. New light was obtained by the learned men who sprung up under the caliphate, and who, by the conquests of their countrymen, and the wide diffusion of their faith, gained more extensive knowledge of the interior of Asia than the ancients ever possessed; and even than what, with regard to some districts, modern Europeans have since attained.

In modern times, as soon as Europe breathed from the agitations which accompanied the downfall of the Roman empire, peculiar circumstances called her attention strongly towards the East. Such, especially, was the effect of the crusades, undertaken to recover the Holy Land, and to repress the progress of the infidel arms. These celebrated expeditions gave a deep interest to the accounts of Asia and the East; but there was no science to collect or arrange the intelligence which they afforded. The crusading geography regards little except Palestine, and the theatre of the wars for its recovery; it places Jerusalem in the centre of the world, and presents only vague notions of any remote countries. A more distant alarm was given by the rapid conquests of the Tartars under Zingis; and his posterity, after subduing Tartary, China, and Russia, over-ran Poland, and invaded Germany. To avert a danger so pressing, a series of embassies was sent, under Carpini, Rubruquis, and other monks of the Romish church, with commission from the pope and the Christian princes. These envoys were received at the frontiers, and carried far into the heart of Tartary, through regions hitherto untrodden by any European. In these vast plains they beheld the uncouth pomp and barbarous array of the Great Khan; and, besides the vast extent of hitherto unknown land which came under their view, they learned particulars respecting the most remote extremities of Asia. Again, the revival of commerce and industry in Europe was accompanied with an almost unbounded curiosity to explore the vast and opulent regions of the East. Under its influence, a single Venetian citizen, Marco Polo, stimulated, it would appear, almost solely by individual enterprise, penetrated across the whole of Asia, reaching even to the eastern coast of China. His narrative conveyed an idea of the vastness of the continent, and of the splendour of its distant regions, surpassing the most magnificent conceptions hitherto formed. Several adventurers followed in the same path, but with inferior success; and the celebrated narrative of the traveller Sir John Mandeville, is, we fear, a mere tissue of imposture. The mixture, or at least the appearance, of fable in these narratives, caused the public to doubt; until the Portuguese, in the reigns of their great kings, John and Emanuel, under the conduct of Vasco da Gama, dispelled the mystery, by passing the southern cape of Africa. They soon arrived in India; and in the course of twenty years, in the pursuit either of commerce or conquest, explored all the shores of Asia from Arabia to Japan. A full view was thus acquired of the extent of the continent in the principal dimensions. Its northern expanse and limits, however, remained still hidden in obscurity. Even Tartar conquest had never penetrated beyond the Altai, or discovered any objects worthy of its ambition in these frozen regions. This career was reserved for Russia. Notwithstanding its poverty, this region, by its wide extent, and the facility of such a conquest, tempted her ambition. Her first operations were made from the north and the province of Archangel. Anika Strogonoff, an enterprising merchant, penetrated by his own exertions to the northern Obi and the country of the Samoieds; and, by the valuable furs, and the specimens of a new and singular people which he brought thence, roused the curiosity of the court. But Siberia was chiefly made known by the romantic adventures of Yermak the Cossack, who, setting out with a small body of his countrymen, found it easy to drive before him the undisciplined forces of the Tartars, and was soon unexpectedly at the head of a great kingdom. The czars accepted him as a vassal, and after his death steadily went on in the career of discovery and conquest. In 1639, about 50 years after the first entrance into Siberia, Dimitri Kopilof reached the shores of the Eastern Ocean. Thus an empire, nearly 4000 miles in length, was added to Russia by a handful of Cossacks and hunters. The questions, however, whether Asia be everywhere bounded on the north by the Polar Ocean, how that ocean communicates with the Pacific, and whether the continents of Asia and America be conjoined or separated, have been anxiously enquired and disputed among geographers. The English and Dutch made it one of the first efforts of their infant navigation to seek by this course a route to the East Indies; but when they formed such a hope, they were ignorant of the vast extent and desolate character of these shores, and of the huge masses of ice with which they were almost perpetually obstructed.

Accordingly, the boldest navigators who made the attempt, if they did not perish, were arrested at or near Nova Zembla, and thought themselves fortunate in being able again to reach home, leaving their object unfulfilled. The Russians, however, by land, or in small barks, gradually crept along these shores, and found their territories everywhere bounded by the Frozen Ocean. At length the united efforts of Behring, Shalaurof, and Cook discovered a strait separating the two continents, and beyond which, on each side, they rapidly diverged. There remained still, however, on the Asiatic coast a portion, not fully explored, which some alleged made a great circuit, and rejoined that of America. According to Captain Cochrane's account, the late expedition of Baron Wrangel has settled this question, and ascertained that there is a continuous ocean along the whole north of Asia.

Sect. IV.—*Social and Political State of Asia.*

In regard to its social and political state, Asia presents, of course, a most varied scene; and yet there are some features which at once strike us as generally characteristic of this continent. Among these is the transmission of institutions, usages, and manners unaltered from the earliest ages. The life of the patriarchs, as described in the earliest of existing historical records, is still found unchanged in the Arab tent. The courts of Nineveh and Babylon seem to have been marked by features of pomp nearly similar to those of Delhi and Ispahan. Asia, at a very early period, anterior even to the commencement of regular history, appears to have made a vast stride in civilization; but then she stopped, and has suffered herself to be far outstripped by the originally less advanced nations of Europe.

The despotism to which the people of Asia are generally subjected is connected, probably, with this stationary character. A republic, an hereditary aristocracy, a representative assembly, a regular control of any kind, are, except in some local and peculiar circumstances, ideas altogether foreign to the mind of an Asiatic. While, however, the general principles of government remain so fixed and immutable, the change of ruler and of dynasty is much more frequent than in Europe. As the ideas of hereditary right and of primogeniture, are much less deeply rooted, a younger son, or even an uncle, of the reigning sovereign, if more able and popular, finds it easy to dispute, and even to wrest the sceptre from his feebler hands. Oriental sovereigns, even the greatest, still maintain the primitive institution of sitting and administering justice in person. Though immutable in their forms of court and maxims of government, they are changeable as to their place of residence and seat of empire. Every successive prince usually selects some favourite city which he either creates or raises from insignificance, and lavishes his wealth in adorning it. The abodes of his ancestors are neglected; and hence Asia is covered all over with decayed capitals and ruined palaces.

The number of communities, of chiefs, and even of princes, making a regular trade of robbery is another feature that strongly characterises Asia. They carry it on in no clandestine manner, but avowedly, even boastfully, and as a calling which they consider as honest and respectable. If they have accepted a composition similar to the old English "black mail," or if they have pledged their faith to an individual, they inviolably maintain it. The numerous tracts of mountain and desert afford them holds in which to maintain themselves; and these are seldom far distant from some rich plain, or great commercial route, on which to exercise their depredations. Arabia, from the earliest times, has been a hive of such plunderers.

The aspect and manners of the Orientals are different from those of Europeans, and in many respects exhibit a decided contrast. Instead of our tight short clothes, they wear long floating robes, wrapped loosely round the body. A light turban supplies the place of the hat, and sandals are worn instead of shoes. In entering the house, or wishing to show respect, when we would take off the hat, they take off the sandal. They make no use of chairs, tables, plates, knives, forks, or spoons. At meals they seat themselves cross-legged on the floor, and eat out of a large wooden bowl placed in the middle, and filled, not with our solid joints, but usually with stews or sweatmeats. This dish is common to the whole company, and each thrusts in his hand without ceremony, and carries the morsels direct to the mouth. In return, they are very scrupulous about the washing of the hands. They use no beds, or at least nothing that we would call a bed. An Oriental, going to sleep, merely spreads a mat, adjusts his clothes in a certain position, and lays himself down. Their household furniture is thus exceedingly simple, consisting of little more than carpets covering the room, and sofas set round it, both which are of peculiar beauty and fineness. Their attire is also simple, though composed, among the rich, of fine materials, and profusely ornamented with jewels and precious stones. Their arms and the trappings of their horses are also objects on which they make a studied display of magnificence. The beard, over all the East, is allowed to grow, and is regarded with reverence.

In their disposition and temper, the people of the East show striking peculiarities. They are grave, serious, and recluse; they have no balls, no theatres, no numerous assemblages; and they regard that lively social intercourse in which Europeans delight, as silly and frivolous. Unless when roused by strong incitements to action, they remain stretched on their sofas, and view as little better than madmen those whom they see walking about for amuse-

ment and recreation. Their moral qualities cannot be very easily estimated, but may be generally ranked below those of Europeans. Their domestic attachments are strong, and their reverence for ancestry deep; their deportment is usually mild and courteous; and they show themselves capable of generous and benevolent actions. On the other hand, among the subjects of the great empires, the obligations of truth and honesty are habitually trampled under foot; the statesmen and chiefs are usually designing, treacherous, and inhuman; devoid of honour, and capable of the most enormous crimes. The smaller tribes, who display a greater manliness and energy of character, are rude, coarse, and addicted to predatory habits. The sentiments and conduct of the Asiatics towards the female sex are such as cannot exist without a general degradation of character. The practice of polygamy, with the jealous confinement to which it naturally leads, seems to be the radical source of this evil. The exclusion of the sex from society; the Hindoo maxim which prohibits them from reading, writing, and being present at religious ceremonies; are evidently parts of a general system for reducing them to an inferior rank in the scale of creation. It is true there is one local example (in Thibet) of an opposite system,—female sway, and a plurality of husbands; but this is evidently no more than a capricious exception to the general rule.

A high and even ostentatious profession of religion generally distinguishes the Asiatics, and the name of God is continually in their mouths. Their creeds, however, are all marked by that deep tincture of superstition which seems naturally connected with a crude and imperfect state of knowledge. In many parts of the continent, the most savage and degrading rites are practised; and in all, the favour of the Deity is supposed to be gained rather by splendid donations, costly structures, and elaborate outward observances, than by purity of heart and life. The pure and refined system of Christianity, though it was first communicated to Asia, has not maintained its ground against these superstitious propensities. Two systems of faith divide Asia between them: one is that of Mahomet, which, by the arms of his followers and of the conquering Tartars of central Asia, has been thoroughly established over all the western tracts as far as the Indus. It even became, for centuries, the ruling religion in India, though without ever being that of the body of the people. The other is the Hindoo religion, divided into its two great sects of Brahma and Boodh; the former occupying the whole of Hindostan, the latter having its centre in Thibet, filling all the east of Asia and Tartary, and penetrating even north of the Altai.

SECT. V.—*Industry and Commerce in Asia.*

The useful arts are cultivated in the Asiatic empires with somewhat peculiar diligence. Agriculture is carried on with great industry and care, though by less skilful processes, and with much ruder machinery, than in Europe. A much smaller amount of capital, particularly in live stock, is employed upon the land. The cultivators scarcely rise above the rank of peasantry. The chief expenditure is upon irrigation; for, in all these tropical regions, water alone is required to produce plentiful crops. Asia has also a number of manufactures, which, though conducted with small capitals and simple machinery, are not equalled in richness and beauty by those of any other part of the world. All the efforts of European art and capital have been unequal fully to imitate the carpets of Persia, the muslins of India, the porcelain of China, and the lacquered ware of Japan. Commerce, though fettered by the jealousy of the great potentates is very active throughout Asia. The commerce of Europe is principally maritime; that of Africa principally inland. Asia combines both. Her interior caravan trade is very considerable, though much diminished since Europe ceased to be supplied by this channel. The native maritime trade on her southern coasts is also considerable, but the foreign trade, particularly that carried on by the English nation with India and China, has now acquired a superior importance.

SECT. VI.—*The Asiatic Languages.*

The Asiatic languages are classed in seven groups. I. The family of the Shemitic languages. II. The languages of the Caucasian region. III. The family of the Persian languages. IV. The languages of India. V. The languages of the region beyond the Ganges. VI. The group of the Tartar languages; and, VII. The languages of the Siberian region.

SUBSECT. 1.

The family of the Shemitic languages may be divided into five branches:—1. The Hebrew; 2. The Syriac or Aramean; 3. The Median; 4. The Arabic; 5. The Abyssinian.

(1.) The Hebrew branch includes the Hebrew, the Phœnician, and the Punic. This appears contrary to the opinion of the learned writer whom we have quoted in the introductory chapters, Part II.; and who shows that the Phœnicians descended from Ham. He might have added, that their city, *Sidon*, was named after the first-born son of Canaan.

The Hebrew, considered in relation to three principal epochs, may be distinguished as forming three different dialects: the *ancient* or *pure Hebrew*, spoken and written from the

earliest age of the nation until the Babylonish captivity, after which it ceased to be spoken, and became a learned language. The Jews have continued to use it as such, with more or less purity, until the present day. In this idiom are written the Scriptures of the Old Testament, ending with the prophecy of Malachi. The *Chaldee*, which is almost identical with the Syriac. This language was brought by the Jews from Babylon. They introduced into it some Hebraisms, and at a later period a few Greek words, and even Latinisms. It was spoken and written until the eleventh century. The oldest work in this language is Daniel; after which rank the Targum of Onkelos, the Targum of Jonathan, and the Talmud of Jerusalem. The *Rabbinical* dialect, formed by the numerous learned Jews of Spain, in the eleventh century, by a mixture of the Chaldee with the ancient Hebrew.

The Phœnician was formerly spoken throughout the whole coast of Syria, from Egypt to Tripoli. It appears to have differed very little from Hebrew. The navigation, colonies, and commerce of the Phœnicians, as we have already observed, spread their language and writing over all the coasts of the Mediterranean, especially in Cyprus, Cilicia, Sicily, Spain, and Africa. The ancient medals of Tyre, Sidon, Acre, Berytus, Arad, and Marathus, afford the means of ascertaining the ancient Phœnician alphabet; but no memorials respecting the literature of the nation have been discovered.

The Punic, Carchedonic, or Carthaginian, appears to have been considered one of the dialects of the Phœnician. It was the language of the Carthaginians, once masters of the whole north coast of Africa, part of Sicily and Spain, and the isles of Sardinia and Malta. It was spoken in Africa in the times of Jerome and Augustine, but has long been extinct. The voyage of Hanno, of which the Greek is an abridged translation, was originally written in this language.

(2.) The branch called Syriac or Aramean; the latter name being derived from Aram, which in its scriptural acceptation includes Syria, Mesopotamia, Chaldea, and Assyria. This idiom formerly extended through Persia to Samarcand, and even into Tartary and central Asia, where it became known through the merchants and the religious sect of the Nestorians. Its principal dialects appear to have been the Palmyrene, the Nabathean, and the Sabian, used by those sectaries who are, strangely enough, called Christians of St. John the Baptist; and who are said not to believe in him whom their avowed leader proclaimed.

The Chaldee, formerly current in Chaldea, and for many centuries extinct. It was spoken at the courts of Nineveh and Babylon; and in it were written the astronomical observations, the most ancient on historical record, which were found at Babylon by the philosopher Callisthenes. This language, learned by the Jews in their captivity, and by them mingled with the Hebrew, gave birth to the dialect called the *Chaldaic*.

(3.) The Median branch; so named because the only language it comprises was spoken in ancient Media. This language is the Pehlvi or Phelvy, formerly in use throughout Western Persia, and on the banks of the Tigris. It was the written and current language of all the higher classes in the Persian empire, and was spoken at the court of its ancient kings. Its high antiquity cannot be questioned. Into it were translated the books of Zoroaster written in Zend, and these translations are perhaps as ancient as the originals themselves. The medals and inscriptions of the Sassanides are also in Pehlvi.

(4.) The Arabic branch includes only one language, in which are to be distinguished the *ancient*, the *literal*, and the *vulgar* Arabic.

i. The ancient Arabic; an idiom long extinct, was spoken throughout Arabia, in two principal dialects, the *Hamiar* and the *Koreish*. The Hamiar, spoken in the eastern part, is entirely unknown to us. It probably resembled the Axumite, and was written in an alphabet called Musnad, also extinct. The Koreish was spoken in Western Arabia, especially in the vicinity of Mecca. This dialect, improved by Mahomet and his successors in the seventh and following centuries, became—

ii. The literal Arabic, common to the whole Arabian nation, and the written and literary language of most of the nations subject to the vast empire founded by the successors of Mahomet. In this language that code of imposture the Koran is written. Though it has long ceased to be spoken, it has continued to be the *liturgic* and learned language of all the numerous nations professing Islam, from the shores of the Indian Ocean to the westernmost corner of Morocco, and from the Wolga to Cape Delgado in Africa. From the ninth to the fourteenth century, while other nations were involved in darkness, the literature of the Arabs shone in its utmost splendour.

iii. The vulgar Arabic, spoken in Arabia and in the greater part of Syria and Mesopotamia, in a part of Khusistaun or Fars; along the Persian Gulf; in the kingdom of Persia; in some parts of the Malabar and Coromandel coasts; in all parts of Egypt, in a part of Nubia, especially along the Nile; in all the towns of the Barbary states by the Moors and Arabs, and in a part of their plains by the Bedoween Arabs; in a part of Beled-el-jereed; and in some of the oases of the African deserts. It is singular to remark that the name *Arab* is a mere geographical term; *Jesirat el Arab* meaning in this language the isle or peninsula of the *West*, which it is, when viewed in relation to the rest of Asia. By a more figurative appellation, the *Bedoweens* are designated "the sons of the desert." The simplicity of the

worshippers at Mecca, long anterior to Mahomet, denominated according to their position the countries that lay on either hand, when the pilgrims took their way northward on their return. El *Yemen* was the country on the right, El *Xam*, or, as the French imitate the aspirate, El Sham, is the country on the left, which answers to Syria.

The nations that speak Arabic use everywhere the same words; the dialects differ little from each other. They are, that of *Yemen*, considered the purest; that of *Mecca* and its neighbourhood, deemed to be one of the most corrupted; the *Bedoween*, spoken in a great number of subdialects and varieties by numerous wandering tribes; the *Syrian*, spoken in Syria and Mesopotamia; the *Maronite*, spoken in the country of the Maronites; the *Druse*, spoken in the country of the Druses; the *Mapul*, spoken by the Mapul tribes on the Malabar coast, and by the Chaliates on that of Coromandel; the *Egyptian*, spoken in Egypt and the neighbouring countries; the *Mogrebin*, or Moorish, spoken in the Barbary states; the *Mosarabic*, or Maranish, formerly spoken in Spain, during the dominion of the Arabs, but long extinct; and, lastly, the *Maltese*, a jargon composed of Arabic, Italian, and Provençal.

(5.) The Abyssinian branch, so called because it comprehends the principal idioms of Abyssinia. All these may be subdivided into two classes, according to their greater or less affinity to the Axumite or to the Amharic. The Axumite comprises the ancient Gheez and the modern Gheez; the Amharic includes the Semian, the Arkiko, the Narea, and the Dembea.

SUBSECT. 2.

The languages of the Caucasian region are thus classed:—1. The *Georgian* family; consisting of the ancient and modern Georgian, the Mingrelian, the Suane, and the Lasian. 2. The *Armenian* family; including the ancient Armenian, now extinct, except in the literature and the public worship of the nation; and the modern or vulgar Armenian, spoken by the Haikans in Turkish and Persian Armenia, in part of Georgia and Shirwaun, and in the government of Istchil. 3. The *Lesghian* languages, including the Awar, the Kazikumuk, the Akusha, and the Kura. 4. The *Mizdjedghi*, spoken by the people of that name in southern Circassia, and comprising four principal dialects. 5. The *Circassian*, spoken by the Circassians or Cherkasses, whose true name is *Adije*, probably the Zyges of Strabo and the Ziches of the Byzantine writers. 6. The *Abassi* or *Absne*, spoken by the Abassi, now subjects of the Russian empire.

All the languages of the Caucasian region are excessively harsh, and are remarkable for an extraordinary assemblage of consonants and an accumulation of vague and diphthongal sounds, many of them guttural. The Armenian and the Georgian are the only written languages; those who speak the others use in writing either the Arabic, the Georgian, or the Turkish idiom.

SUBSECT. 3.

The family of the Persian languages consists of—1. The *Zend*, spoken formerly in Bactriana, where it ceased to be the vulgar tongue before the Christian era. This is the language in which is written the *Zend-avesta*, the sacred book of the fire-worshippers, by whose priests, the Magi, it was spoken. The Zend may be considered as the parent of all the Persian idioms, perhaps even of that called by excellence the *Sanscrit* or *perfect* language. It possesses its peculiar alphabet, consisting of forty-two letters. It is written from right to left. It also employed the cuneiform characters, as in the inscriptions found among the ruins of Persepolis, commonly denominated by the Persians the *Cheyl Minar*, "the forty columns" (i. e. the *many* columns), and *Takht-e-Jemsheed*, "the throne of Jemsheed."

(2.) The *Parsi*, *Farsi*, or ancient *Persian*. It had surpassed the Zend in copiousness, accuracy, and elegance, long before it became, under the Sassanides, the language of the court and of public business throughout the empire. Among its dialects may be distinguished the Parsee, spoken, or at least understood, by most of the Parsees or fire-worshippers, called *Guebre* or *Giaour*, infidels; a term, observes Gibbon (ch. lxviii.), "transferred from the Persian to the Turkish language, from the worshippers of fire to those of the crucifix," and applied not only to the Roman Catholics, but to Christians of every denomination.

(3.) The *Modern Persian*, derived from the Parsee, and formed, during the long domination of the Arabs in Persia, by the mixture of Arabic with Parsee, and some Turkish. It is spoken not only in Persia, but in a great part of India, where it is very common among the Mahometans, especially those of Agra and Aurungabad. It is also the language employed in the public documents, in the courts of record, and the finance-registers of the provinces which formed the vast empire of the Great Mogul. A dialect of it is spoken by the people of Bukharia, and by those of the same nation scattered among the towns of Asiatic Russia, and in some provinces of China. It has very great analogy with the Sclavonic, and still more with the languages of the Germanic family, not only in radicals and simple words, but in inflexions and grammatical forms. It has many other dialects.

(4.) The Kurde, or Koord, spoken in Kurdistan and Luristan. The Koords, retaining the

habits, and it is said the very costume, of their ancestors, the Carduchi of Xenophon, are divided into a great number of tribes, there being seventy-two in the government of Diarbekir alone. That it is spoken by the different tribes in Luristan appears certain from the investigations of Mr. Rich, English resident at Bagdad. The Koordish language differs little from the Persian in words, but much in grammar: it is harsh, and much less polished.

(5.) The language of the Ossetes, inhabiting the high valleys of Caucasus, between the Mizdjedghi on the east and the Basians or Emeriti on the west, and shown by Klaproth to be descended from a colony of ancient Medes. In this language are several words common to the Wotieque and some other idioms of the Arabian family.

(6.) The Pooshto, or Afghaun, spoken in several dialects by the numerous tribes of the Pooshtaneh, known in Persia by the name of Afghauns and in India by that of Patans. It has much analogy with the Persian, and very little with the Shemitic languages. Its literature is very poor, and of no earlier date than three centuries ago.

(7.) The Belooch, spoken by the dominant nation in Beloochistan and Sinde. It has great affinity with the Persian, and may be divided into three dialects: the Belooch proper; the Babe, spoken by the people so named, a great part of whom live in the kingdom of Caubul; and, the Sindy Belooch, spoken by the Belooches dwelling in Sinde. This language, which is very little known, is written in the Arabic character, with some additional letters.

Subject. 4.

The languages of India may be divided into two principal branches:—1. Those forming the family of the Sanscrit; 2. Certain particular languages which do not belong to that family. In the first branch, a distinction must be made of the dead languages, or languages no longer spoken. These are, 1. The Sanscrit, meaning, in the Indian acceptation, perfect or complete. It was formerly spoken throughout the greater part of India; but it has been an extinct language for several centuries, and is now studied by the Bramins and Indians, as Greek and Latin are with us. Like the Greek and German, it has the property of forming compound words *ad libitum*, and has a great quantity of them. Its most ancient books are the Vedas, subdivided into eighteen vidjas, or parts, embracing all the branches of human knowledge, from theology to music; the laws of Menu, or the civil and religious code of the Indians; and the two epic poems called the Mahabharata and the Ramayana. The Sanscrit has a particular alphabet, called the Dewanagari, consisting of fifty-two letters. It is written from left to right, and is the model on which are formed several alphabets peculiar to the idioms of the Indian peninsula, that of the Thibetians, and those employed for writing several of the languages of Indo-China. 2. The Bali or Pali, also called the Magada or Misra. This language, which is regarded as a sister of the Sanscrit, was formerly spoken in Magadha, a part of Bahar south of the Ganges, by some considered as the native country of Buddha. It was widely spread in India before the Christian era, but became extinct when the sect which spoke it was expelled. Like the Sanscrit, it has long ceased to be spoken, though it has continued as the liturgic, hieratic, and literary language in the isles of Ceylon, Bali, and Madura, in a great part of Java, as well as throughout Indo-China, except the peninsula of Malacca. It is also the religious language of the numerous inhabitants of China and Japan who profess Lamaism and Buddhism. It has four principal dialects, the Magadha and the Bali proper, the Fan and the Kawi.

The living languages of India, collectively called Pracrit, are many of them derived from the Sanscrit. In several, half the words are pure Sanscrit; the rest being composed of words partly belonging to foreign languages that are well known, especially the Persian, and partly to others imperfectly to be traced, with some Sanscrit words, altered by a regular system of permutation. The Saraswata, an Indian nation which has long disappeared, and which dwelt along the Saraswati in the Punjab, spoke a particular language, derived from the Sanscrit, and called Pracrit. The branch of the Pracrit languages appears at present to include, among numerous others, the Hindostanee, the Punjaube, the Cashmeerian, the Caubul, the Sindee, the Zinganee (called in some parts of Europe the Bohemian or Gipsy), the Kutch, the Malayalam, the Maldivian, the Cingalese, the Tamul, the Carnatura, the Telinga, the Orissa, the Bengalee, the Assamese, the Mahratta, the Bundelkhund, and the Malwahr.

(2.) Of the particular languages forming the second branch of the great Indian family as not belonging to the Sanscrit, the principal are the Touppah, the Garow, the Choomeas, the Cattywar, the Gond, the Coteesghur, and the Wadasse.

Subject. 5.

The languages of the region beyond the Ganges are divided into five branches:—1. The *Thibetan*, including the Thibetan proper, which is also the language of the Lamas or Mongol and Calmuck priests; the Uniyas, and the Bhutias. 2. The *Indo-Chinese* branch, comprising all the languages spoken in the peninsula beyond the Ganges called Indo-China or India Ulterior. In the still imperfect ethnography of this region, its languages may be divided into two classes; the polished and the written, and the rude and unwritten. Of the former

class are the Aracan-Birman, the Moital, the Peguan, the Laos-Siamese, the Cambodian; and the Assamite, with its four dialects, the Tonquinese, the Cochin-Chinese, the Loyes, and the Lactho. Of the unwritten class are the Kolun, the Plaee, the Dhanu, the Samang, the Moi, the Andaman, and the Nicobar. 3. The *Chinese* branch, comprising the languages spoken in China and the neighbouring isles. This branch is divided into the languages of the *Chinese family*, and some particular languages. The Chinese family includes,—1. The *Kou Wen*, or ancient Chinese, supposed to have been formerly spoken throughout a great part of China. It is, perhaps, the most monosyllabic language in the world, and that which contains the greatest number of monophonous words. 2. The *Kouan Kou*, or modern Chinese, spoken in a multitude of dialects throughout all China Proper, and by the educated classes throughout the empire; also by the numerous Chinese established in Indo-China and Western Oceania, especially in Java, Borneo, Celebes, Timor, and Manilla. 3. The *Ching Cheu*, or *Chang Cheu*, spoken by the inhabitants of the province of Fo-kien. It differs from the Kouan Hou not only in the pronunciation, but in the etymology of words, and in grammatical construction. The *particular* languages of the Chinese branch are the Miaos, the Lolos, the Mien Ting, and the language of the interior of Hainan. 4. The branch called the *Sian-Pi* or *Corean*. It includes one language, the Corean, spoken in the kingdom of Corea, and apparently in the neighbouring isles, by the Coreans; called by the Japanese *Sian-Pi*. It has borrowed many words from the Chinese. 5. The *Japanese* branch is at present known to include only the languages spoken by the Japanese, and that which prevails among the people of the Loo Choo islands.

SUBJECT. 6.

The group of the Tartar languages consists of three families:—1. The Tungusian; 2. The Tartar or Mongol; 3. The Turk.

(1.) The *Tungusian* family, common to the ancient and modern people of Mandshuria, and to several tribes inhabiting eastern Siberia, is not known to include more than two languages: the *Mandshoo*, spoken in the Chinese empire by the Tunguses, who are and have been the dominant nation since 1644, when the ancestor of the reigning family was placed on the throne; and the *Tungus*, spoken by the Tunguses, who live in the Russian empire, scattered over more than a third of Siberia, from the Yeniseï to the Sea of Okhotsk.

(2.) The *Tartar* or *Mongol* family comprises all the idioms spoken by the Tartars properly so called, subdivided into a great number of communities dispersed over Mongolia, Calmuckia, a part of Thibet in the Chinese empire, and several parts of the Russian empire. These idioms appear to form a family composed of at least three languages, the Mongol proper, the Calmuck, and the Bouriet.

(3.) The *Turk* family, including the *Turkish*, the *Yakoute*, and the *Tchouwache*. The Turkish is spoken in a great number of dialects. The *Osmanli*, or Turkish proper, is spoken by the Osmanlis, Ottomans, or Turks: the *Kaptchak* by the pure Tartars as they call themselves, living in the Russian governments of Kasan, Simbirsk, Penza, and Saratov, and by the pretended Tartars, settled in those of Astrachan and Orenburg. The *Turcomaun*, spoken by the nomadic nation of Turcomauns, divided and subdivided into a prodigious number of branches: the *Caucaso-Danubian*, spoken in three principal sub-dialects by the Basians, the Koumouks, and the Nogais dependent on the Russian empire; the *Kirghis* and the *South Siberian*, spoken by various Turkish tribes inhabiting that region.

The *Yakoutes*, who speak the language so named, are the most northern and most eastern of all the Turk tribes: the *Tchouwaches*, called by the Russians the *mountain-Tartars*, are most numerous in the governments of Kasan and Wiatka.

SUBJECT. 7.

The languages of the Siberian region are thus classed:—1. The *Samoyede* family, which includes the different languages and dialects spoken by the nomadic nation of that name, part of which still inhabits the centre of Asia, and the others are scattered over its northern region from Olensk to the straits of Waygatz, and in Europe from these straits to the White Sea. 2. The *Yeniseï* family, so called from the river Yeniseï, by the philologer Klaproth, who classed the languages of which it is composed. The people who speak them, improperly called Ostiaks of the Yenisei, live in the government of Tomsk, along that river and its tributaries, from Abakansk to Touroukhansk, separating the Samoyedes of the south from those of the north. 3. The *Youkhagire*, spoken by the Youkhagi, or Adon Dommi, a nation now reduced to some hundreds of families, who have almost all embraced Christianity. 4. The *Koryeke* family, which includes the idioms spoken in the north-east of the government of Irkutsk by several communities called Koryekes, and some others comprised under the denomination of Tchuktches. These tribes dwell to the east of the Youkhagires, and are surrounded by the real Tchuktches, by the Kamtchadales, and the Tunguses. 5. The *Kamtchadale* family comprises the idioms spoken in the peninsula of Kamtschatka, by the Kamtchadales, who call themselves *Itulmen* or *Itelmen*. Those who escaped the ravages of the small-pox in 1768, 1784, 1800, and 1801, have embraced Christianity, and adopted

the Cossack manner of living. 6. The *Kurilian* family includes the idioms spoken by the Ainos or Kurilians, the aborigines of the Kurilian archipelago, the isle Taraikai, and part of Mandshuria. The languages comprised in it are the Kurilian proper, the Jesso and the Tarakas.

Sect. VII.—*Divisions of Asia.*

In dividing Asia into parts, we may view it as consisting of Southern Asia, Middle Asia, and Northern Asia.

Southern Asia comprises Asia Minor, Syria, and the other Asiatic parts of the Turkish empire; Arabia; Persia; Hindostan; India beyond the Ganges; China. To this division are appended the great Oriental archipelago, and the archipelago which constitutes the empire of Japan.

Middle Asia consists almost exclusively of the vast regions of Tartary, divided into Chinese and Independent Tartary. To this may be added the Caucasian territory, situated between the Black Sea and the Caspian.

Northern Asia consists wholly of an immense uniform plain, subjected to the sway of Russia, and bearing the name of Siberia.

CHAPTER II.

TURKEY IN ASIA

Asiatic Turkey is a very extensive region. We have seen several of the finest portions of Europe, and some of the principal seats of ancient civilization, subject to the Turkish yoke. It is also extended over a number of the finest and fairest regions of Asia. No countries in the world are more favoured by nature, or more marked by grand historical features. Babylonia, Assyria, Armenia, Lydia, Syria, Judea; all these once renowned empires and kingdoms are now mostly included in Asiatic Turkey; which consists not so much of any one single country, as of several detached and dissimilar states, which the sword, wielded by fanaticism, has combined into one vast heterogeneous mass.

Sect. I.—*General Outline and Aspect.*

The extensive territories thus united are bounded on the west by the Mediterranean and the long succession of straits which connect it with the Euxine, and divide Asia from Europe. On the North they have the Black Sea and the Caucasian territory, where Turkey is conterminous with Russia. To the east is Persia, separated by a line varying with the fortune of war, but which at present nearly coincides with the course of the Tigris, beyond which the mountains of Kurdistan afford a doubtful and debatable ground. To the south a portion of the empire, nominally at least, touches the Persian Gulf, but is circumscribed by Arabia. Of that vast region, at the time when all Asia was yielding to the Ottoman power, the leading positions, particularly along the Red Sea, were occupied by Turkish garrisons; but it now defies them at every point, and pours it desolating bands over the fine plains of Syria and Bagdad. These vast precincts, taken in their greatest length from east to west, comprehend about 22° of longitude, making in that parallel 1200 miles; from north to south, 11° of latitude, or nearly 800 miles in breadth; but it is so irregularly formed, and branches into so many angles, that the superficial extent is less than 500,000 square miles. In particular, a vast encroachment is made, and an almost complete separation of parts effected, by that great expanse of Arabian desert which runs up between Syria and the Euphrates.

This wide region presents a peculiar variety of culture and aspect. Its ranges of mountains are numerous, of great celebrity, and second in magnitude only to the gigantic chains of Andes and Himalayah. Above that chaos of mountains, valleys, and torrents, which constitutes the kingdom of Armenia, primeval Ararat rears its snowy peaks, reminding mankind of the most memorable event in the physical history of the globe. The peninsula of Asia Minor is entirely girded with chains of mountains, leaving between them and the sea sometimes only narrow passes, sometimes broad and fertile plains; and enclosing wide ranges of high table-land which form the interior. Lebanon, the pride of Syria, though no longer crowned with its majestic cedars, contains in its recesses villages, culture, and varied vegetation, while its summits are crowned with perpetual snow. Judea is entirely a country of mountains, some wooded and cultivated, as Bashan and Carmel, others naked and rocky, as those which encircle the Dead Sea; but none of them rivalling the lofty heights of Lebanon or Ararat.

These high and numerous chains give birth to many large and celebrated streams; but none attain the character of rivers of the first magnitude, except the joint and boundary course of the Euphrates and Tigris. Both spring from the depths of Ararat, and in their early course dash though its dark and rocky glens, till they swell by degrees into great rivers. The Euphrates takes a long course westward, till by a wide circuit it becomes

parallel to the Tigris, which has proceeded direct from its origin with a rapidity which is expressed by its ancient name of *Teer*, the arrow. Thenceforth the two rivers pursue a parallel course southwards, enclosing that large and celebrated plain, the Mesopotamia of the Greeks, within which were situated Babylon and Nineveh, the most ancient capitals of the world. At length, above Bassora, the two streams unite their mighty waters, and form a broad channel, called Shat-ul-Arab, which, after a course of about 150 miles, pours itself into the Persian Gulf. The numerous branches, however, into which it is represented as separating, are said to belong not to it, but to the Karoon and other rivers of Khusistan, connected with it only by an artificial channel. If we consider the whole course, from its source to its mouth, as the Euphrates, it will possess a length of 1400 miles, forming, indeed, a very great river, yet not equal to its renown, derived chiefly from the ancient fame and civilization of the regions through which it flows, and of the cities that have been founded on its banks. The course of the Tigris is not more than about 800 miles.

All the other rivers of Asiatic Turkey are of secondary magnitude, and only distinguished by the brilliant historical and poetical associations connected with their names. The mountains among which they rise extending in long ranges parallel to and near the sea, they have not sufficient space to expand. The Kizil Irmak and Sakaria, far better known under the classic names of Halys and Sangarius, cross nearly the whole of Asia Minor, in their course to the Black Sea. The most western tract is still adorned by the beautiful windings of the Meander. The Scamander and the Granicus, notwithstanding their high place in history and song, can scarcely be named as geographical features. Orontes and Jordan, the rivers of Syria and Judea, attain a considerable course by flowing north and south along the back of Lebanon: the former falls into the Mediterranean; but Jordan terminates in the Dead Sea.

Turkey in Asia cannot be said to be a country of lakes, though in some provinces they are a characteristic feature. Asphaltites lays claim, with some plausibility, to the appellation of *sea*. Tiberias, or the Lake of Galilee, enclosed by cultivated lands and wooded mountains, forms a rich and picturesque object. The beautiful lakes of Antioch and Damascus attract little notice on the great scale. Chains of saline lakes, of considerable magnitude, extend through some parts of the interior table-land of Asia Minor.

References to the Map of Turkey in Asia.

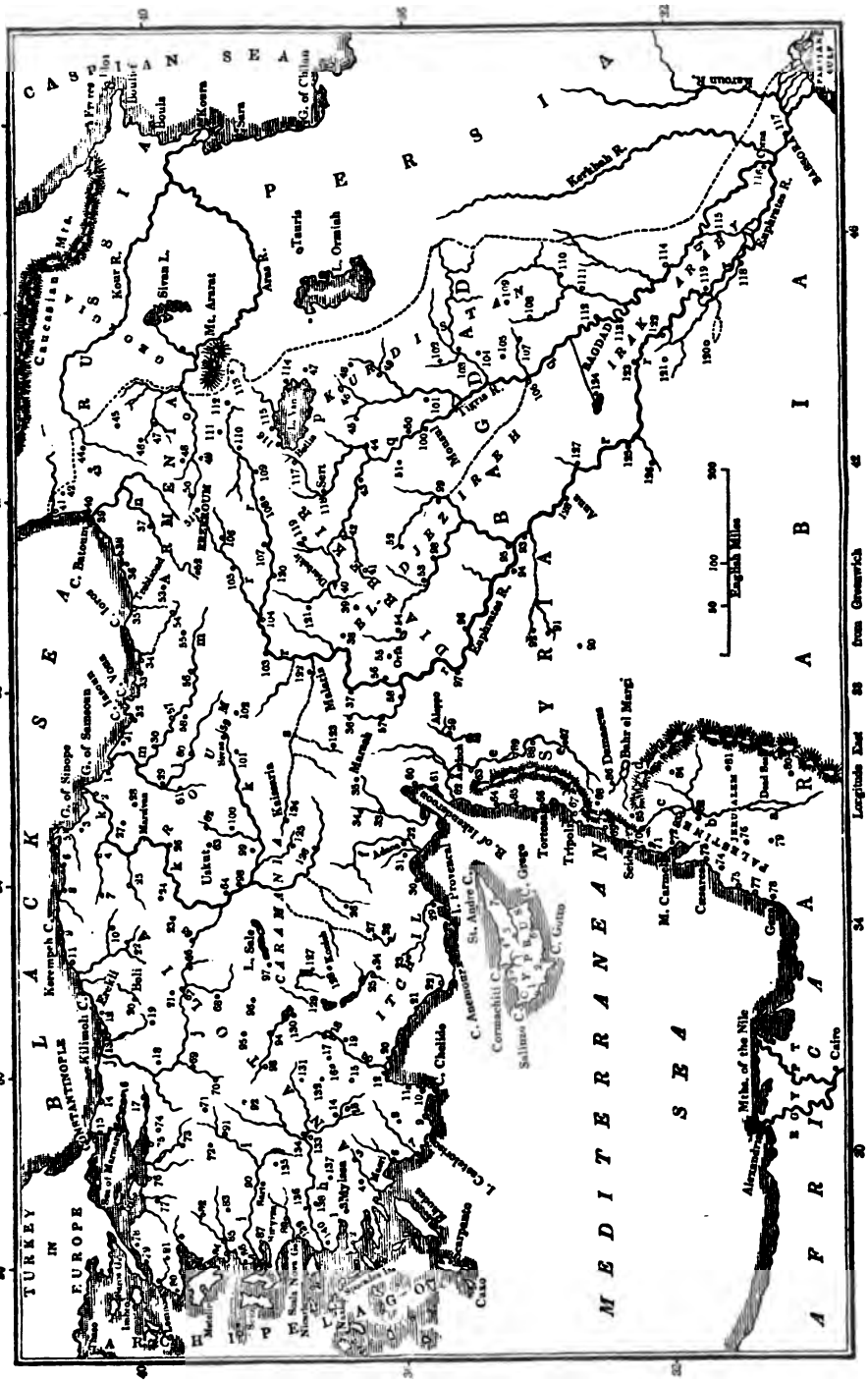
NORTH PART.
1. Samsoun
2. Baffra
3. Gherzeh
4. Boiabad
5. Sinope
6. Istifan
7. Kastamouni
8. Kinla
9. Messet
10. Ashar
11. Amasserah
12. Erekli
13. Melin
14. Kili
15. Scutari
16. Isnikmid, or Nicomedia
17. Ienik
18. Terekli
19. Modourli
20. Boli
21. Sever-Hissar
22. Tchirkis
23. Gladjuk
24. Kiangari
25. Tosia
26. Tchouroum
27. Vizirkiupri
28. Marsivan
29. Amasiah
30. Sounsia
31. Termeh
32. Fatsa
33. Keresoun
34. Tereboli
35. Trebisond
36. Rizeh
37. Ispera
38. Mapavreh
39. Gounieh
40. Batoum*
41. Poti*
42. Torna*
43. Koula*
44. Akaizike*
45. Achalkalak*
46. Koomba
47. Kars
48. Meghinghert
49. Delibaba
50. Hassan Kulaah
51. Erzeroum
52. Biabout
53. Estourp
54. Gemishkhana
55. Kara-Hissar
56. Coyla-Hissar
57. Niksar
58. Adras
59. Sivas
60. Tokat
61. Geder
62. Emir Pacha
63. Uskut
64. Kir-Shehri
65. Angora
66. Aias
67. Bei Bazar
68. Yerma
69. Eski-Shehr
70. Kutaiah
71. Kedous
72. Seiman
73. Zendjan
74. Brusa
75. Moudania
76. Pederma
77. Bigah
78. Lampeski
79. Sultanieh
80. Baba
81. Adramyti
82. Ghelemba
83. Ak-Hissar
84. Sandarli
85. Pergamo
86. Fokia
87. Smyrna
88. Vourla
89. Tireh
90. Sart
91. Seleondi
92. Banaz
93. Kara-Hissar
94. Bulwudun
95. Bardakly
96. Tshaktelu
97. Tuzla
98. Kirschehri
99. Kouanga
100. Saraky
101. Otash
102. Kodj-Hissar
103. Dorin Doh
104. Kibban Madan
105. Arabkir
106. Terdjan
107. Jebakehur
108. Moosh
109. Loese
110. Malar Ghird
111. Turba Caleh
112. Diadin
113. Beyazid
114. Van
115. Ardjich
116. Aklat
117. Betlis
118. Sert
119. Ezen
120. Peloo
121. Argana
122. Malatia
123. Bostan
124. Kaissaria
125. Kara-Hissar
126. Nigdeh
127. Jergan Ladik
128. Kooieh
129. Kishakli
130. Ak-Shehr
131. Sandakli
132. Bourdour
133. Pambouk Kalesi
134. Ouzlamlu
135. Allahshehr
136. Guzel-Hissar
137. Ezbatz
138. Kapusli
139. Ayassuluk
140. Miletus.

SOUTH PART.
1. Asyn Kalesi
2. Boodroom
3. Mylasa
4. Mogla
5. Daouas, or Thavas
6. Macri
7. Patara
8. Almali
9. Mira
0. Yanar
11. Tekrova
12. Adalia
13. Buraz
14. Karadjouk
15. Eelenaz
16. Sounsou
17. Isbarta
18. Ekredi
19. Eushar
20. Stavros
21. Alaya
22. Silinti
23. Ermenek
24. Kasaaba
25. Sougla
26. Erkle
27. Laranda
28. Karman
29. Selefkeh
30. Mezetlu
31. Tarsus, (or Tersoos)
32. Adana
33. Anzarba
34. Kars
35. Marash
36. Jemnuck
37. Samisat
38. Soverek
39. Danakra
40. Diarbekir
41. Merdin
42. Safa
43. Jezireh
44. Zaco
45. Amadieh
46. Julamark
47. Koshab
48. Julamark
49. Rauba
50. Eski Mousu
51. Telmuk
52. Nisibin
53. Ras-el-ain
54. Harran
55. Orfa
56. Bir
57. Ain Tab
58. Sadjour
59. Aleppo
60. Bayas
61. Scanderoon
62. Antakia, (or Antioch)
63. Caskenot
64. Latakia
65. Alaria
66. Tortosa
67. Tripoli
68. Baalbec
69. Beirout
70. Seide (Sidon)
71. Soor (Tyrus)
72. Acre
73. Kaisarieh (Cæsarea)
74. Rasiaken (Antipatris)
75. Jaffa (Joppa)
76. Jerusalem
77. Asdood (Azotus)
78. Gaza
79. Hebron
80. Kerek
81. Amman
82. Bysan
83. Tabaria
84. Shemakein
85. Cesarea Philippi
86. Damascus
87. Homs (Emesa)
88. Hamah
89. Hedjam
90. Palmyra
91. Saiba
92. Ain el Coam
93. Rohabeh Meshed
94. El Der
95. Kerkesieh
96. Racca
97. Beles
98. Shalaban
99. Sinjar
100. Mousul
101. Uverdak
102. Erbel
103. Altoun Kupree
104. Kerkouk
105. Tavak
106. Tekrit
107. Koolmaty
108. Eski Kifri
109. Suleymania
110. Khanuky
111. Shahraban
112. Dekhara
113. Bagdad
114. Mandilla
115. Ouasith
116. Cerna
117. Bassora
118. Semeva
119. Divaniech
120. Meshed Ali
121. Meshed Hoseein
122. Hillah (Babylon)
123. Anbar
124. Labata
125. Hit
126. Cubessa
127. Eluce
128. Anna.

CYPRUS ISLE.
1. Baffo
2. Limesol
3. Lofka
4. Cerina
5. Nicosia
6. Larnica
7. Famagosta.

Rivers and Lakes.
a Dead Sea
b Jordan, R.
c Tabaria, Lake
d Bahr el Margi
e Aassy (Orontes), R.
f Sibooa, R.
g Duden Sooi, R.
h Meander, R.
i Sarabat, R.
j Sakaria
k Kizil Irmak, R.
l Yeshil Irmak, R.
m Shawrmawggi, R.
n Teborah, R.
o Aras, R.
p Van, Lake
q Tigris, R.
r Euphrates, R.
s Carasou, R.

[* These towns now belong to Russia, the district containing them having been ceded to that power in 1829.—AM. ED.]


TURKEY IN EUROPE
CONSTANTINOPLE
BLACK SEA
ASIA MINOR
ARMENIA
KURDISTAN
PERSIA
MESOPOTAMIA
SYRIA
ARABIA
MEDITERRANEAN SEA
AFRICA
CASPIAN SEA
Lake Van
Lake Urmiah
Mt. Ararat
Euphrates R.
Tigris R.
Jordan R.
Dead Sea
Cairo
Alexandria
Mouth of the Nile
Damascus
Aleppo
Tripoli
Tortosa
Latakia
Beirut
Acre
Jaffa
Gaza
Suez
Mecca
Medina
Bagdad
Bassorah
Mosul
Diarbekir
Erzeroum
Trebizond
Sivas
Angora
Smyrna
Broussa
Scutari
Nicomedia
Nicæa
Adrianople
Gallipoli
Rhodes
Cyprus
Crete
Sea of Marmora
Black Sea
Caucasian Mts.
Kurdistan
Armenia
Persia
Arabia
Syria
Asia Minor
Turkey in Europe
English Miles
Longitude East from Greenwich

SECT. II.—*Natural Geography.*

SUBSECT. 1.—*Geology.*

The reader is referred to the remarks under Chap. I. Sect. II. p. 218.

SUBSECT. 2.—*Botany.*

This country, so interesting in an historical point of view, as being that portion of our globe where the transactions recorded in the earliest part of Scripture took place, is comparatively, owing to the jealous disposition of its inhabitants, but little known as to its individual vegetable productions: still, the labours of the learned enable us to give a tolerably satisfactory sketch of their distribution. As it is from hence that the arts and civilization were carried to other regions of the earth, so are we indebted to this country, and the neighbouring one of Persia, for many of our most precious European fruits. The Walnut and Peach are from the last-mentioned kingdom; the Vine and Apricot from Armenia; the Cherry and the Sweet Chestnut from Lesser Asia, with the Fig, the Olive, and the Mulberry; our most ornamental garden plants, especially "the garden's queen, the Rose," of which one of the most esteemed varieties, the Damask Rosè (*fig.* 537.), is supposed to have been originally brought, at the time of the crusades, from Damascus; the Hyacinth, the Tulip, several kinds of Iris, and the Ranunculus; to which we may add the Horsechestnut, the Lilac, the Sweet Jasmine, the Melon, and the Cucumber.

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Damask Rose.

The sands of Arabia extend, between Irak-Arabi on the east and Palestine and Syria on the west, to lat. 34°, where the soil, divided by chains of mountains, presents numerous rivers and fertile valleys. The sands here are less desert, and not so bare as those of Arabia. The Tigris, the Euphrates, the Orontes or Axius, and their tributary streams, maintain upon their banks a freshness highly favourable to vegetation. The Date winds along the course of the Euphrates and the Tigris. On the east it reaches the plains situated between Bagdad (lat. 33° 9′) and Kermanshah; on the north it advances to Tekrid (lat. 34° 40′); on the west it casts its shadow over the ruins of Palmyra, and penetrates Palestine and Syria as far as the plains of the Mediterranean.

Owing to a circumstance peculiar to the climate of Bagdad, neither the Henna (or *Chenna**), *Lawsonia inermis* (*fig.* 538.), the Banana, nor several other plants of the warmer zone, which grow elsewhere in higher latitudes, can be cultivated there with success. It is not because the temperature of the summer is insufficient; for the heat is excessive and unremitted. It is even said that the thermometer rises to 50° of Réaumur during the period, happily a very short one, when the *samiel* occasions desolation and death; but in winter the temperature falls sometimes to — 2.5°, and perhaps even lower. Niebuhr saw at Bagdad, in February, 1765, ice two inches thick. These sudden colds, which the Orange tree is capable of bearing, destroy the Henna. Thus, Bagdad, in spite of its high medium temperature, which is estimated, perhaps incorrectly, at + 23.2°, presents only the vegetation of the northern limit of the Transition Zone.

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Henna.

From Bagdad to Moussoul (lat. 36° 28′) the banks of the Tigris are fringed with Willows and Cucumbers. Beyond this narrow bend the soil is but a dry and burning sand.

Palestine and the south of Syria, which spread like an amphitheatre along the shores of

* The use of Henna is of very remote date; its ancient name was Cypros. Among the mummies have been found several whose nails preserved the yellow colour still customary among the Orientals; unless, as Olivier suggests, this hue may have been imparted by the action of the bitumen used for embalming the body. The Arabs and Moors cultivate henna to the present day, and use it to dye their hair, and especially the nails of the hands and feet; also the back, the mane, and hoofs of their horses, and even a part of their legs: the women, especially, employ it as an ornament, but abstain from it at the death of their husbands and parents. The leaves of henna are gathered at the beginning of spring, then dried in the air, and reduced to powder, and applied in the form of paste to the parts which they wish to tinge. It dries in the course of five or six hours, and imparts a durable colour. The foliage is also used to cure recent wounds and abscesses.

The henna, according to Olivier, is the Cypros of the Greeks, and the Hacopher of the Hebrews. Its flowers have a strong penetrating odour, like that of Chestnut or berberry. By distillation an extract is obtained from them, which is used in the baths, and with which the people perfume themselves on a visit, or during religious ceremonies, as marriage and circumcision, as well as at the festivals of Bairam and Courbanbairam. It was, no doubt, on account of their odour that henna flowers were scattered by the Hebrews in the apartments of a bride, and for the same reason the Egyptians keep them in their rooms. A considerable trade is carried on in henna leaves, which yields a large revenue to Egypt. Experiments made by MM. Descourtils and Berthollet go to prove that they might be advantageously employed in dyeing woollen stuffs of a yellow colour. For a description of this plant, see, further on, an account of some of the more interesting vegetable productions of the Holy Land.

the Mediterranean, offer a most remarkable instance of the combination of the vegetation of hot and temperate countries. There may be seen together the Date, the Sugar-cane, the Banana, the Henna, the Orange and the Citron, the Pistachio, the Olive, the Carob tree, the Cordia Myxa, the Guilandina Morinda, the Indian Tamarind, the Melia Azedarach (commonly called Pride of India), the Acacia nilotica and farnesiana, with almost all the forest trees of Greece and Italy, and all the fruit trees of Europe. Each species fixes itself, according to its nature, on higher or lower plains, on the slope of the mountains, or on their summits.

The mountains in the interior of southern Palestine form two chains, which run in a parallel line from south to north. In the low part of the intermediate valley lies the lake Asphaltites, which receives the waters of Jordan. The west bank of this lake is bordered by rugged and barren mountains. At their foot Hasselquist found the Solanum sodomæum (*fig.* 539.), the fruit of which, destroyed internally by insects, preserves its colour, but contains only dust. The opposite shore is very fertile, and partly covered with large forests. Burckhardt remarked there the Gum trees (*Acacia* or *Mimosa*) and a tree of the family of Apocineæ, which the Arabs call Ochejir, and which, according to Delile, is the Asclepias procera of the Equatorial Zone.

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Solanum Sodomæum.

To the north of the lake, along the eastern shore of Jordan, lies a hilly country, more than 120 toises above the level of the river, and full of delightful scenery and uncommonly rich vegetation. The hills produce abundantly the Oak, the Pine, the Wild Olive, &c. The streams which pour their waters into Jordan, flow under the shade of Plane trees, Almonds, Olives, Oleanders, &c. The valley of Damascus and the shores of the Orontes are not less fertile.

In the absence of meteorological observations, the vegetation of southern Syria suffices to assure us that its temperature can be little different from that of Cairo. It is not so with the northern districts, with Caramania and Anatolia. The annual variations in the temperature are increased by the influence of a more northerly latitude, to which may be added some peculiar and local causes of cold. This double action is evident at Aleppo, lat. 36° 11′. The Date tree does not grow spontaneously there, and the Lawsonia alba, with the varieties of Orange and Lemon, can only be cultivated by giving them shelter. The Myrtle and Oleander are only seen in a cultivated state. It is certainly possible that some cause may exist, independent of the winter's cold, which prevents the Myrtle and the Oleander from growing wild at Aleppo, as these shrubs flourish without any such assistance in the Crimea, Istria, Italy, and Provence: and the former even stands abroad, without protection, in Cornwall, during the winter. The spring, summer, and autumn are very hot at Aleppo, especially in July and August; the thermometer varying from 25° to 28° Réaumur. From the end of May to the middle of September, the power of the sun, aided by the dryness of the atmosphere, burns up all verdure; but these great heats are incapable of compensating for the inconveniences of a forty days' winter, during which it snows and freezes alternately. During Alexander Russell's residence of seventeen years in Aleppo, he thrice saw the frost so severe as to bear the weight of a man without the ice breaking.

It is no error to suppose that local causes may affect the climate of Aleppo; since at Smyrna, 2° farther north, the Orange grows in profusion. Hasselquist even remarked some old stems of Date trees which had survived the winter: but he could not find any young ones. The latitude of Smyrna probably marks the utmost northern boundary of this equatorial tree. Every traveller remarks the absence of the Olive on the coasts, from the Dardanelles to Sinope: it reappears in the vicinity of that town.

The central part of Turkey in Asia, comprehended between lat. 35° and 40°, is rural, elevated, and intersected by numerous ridges of mountains, of which the most important is Taurus. Though the summer be very warm, and the thermometer often rises in the plains and valleys to 30°, 35°, and even 40° Reau., in the month of July, yet many of the productions of the south do not succeed there, on account of the winter cold. The ground is hardly free from snow at Erzeroum (lat. 39° 59′) till the middle of April; sometimes it even falls in June: the high situation of this town, 1500 toises, may occasion this. A few clumps of trees are thinly scattered on the plains. These were formerly clothed with forests; but since agriculture has been pursued there, the country is bare and unsheltered, and at a distance, almost appears sterile.

Generally speaking, it is to the valleys and the slopes of the hills and mountains that the forests of Asia Minor are confined. The Pine, Fir, and Juniper occupy the most elevated spots: the Larix Cedrus, of which M. de la Billardiere fixed the boundary line on Lebanon at 991 toises, grows also on Mount Taurus. There are several species of Oaks; no country of the Old World produces so many: the greater number are of the evergreen kind. The

Beech prevails in Caramania, Bithynia, Paphlagonia, Pontus, and Colchis, where many of our fruit trees, as the Plum, the Cherry, the Apricot, the Peach, the Almond, the Medlar, the Quince, the Apple and Pear, the Service tree, the Chestnut, the Walnut tree, and the Fig and the Vine, grow wild in the heart of the forests. It is doubtless from this favoured soil that most of these valuable trees have been derived that now adorn Greece, Italy, and the rest of the world. Vast tracts are covered with Olive, Myrtle, Arbutus Unedo, (or Strawberry tree), Terebinth, Lentisk, Pistachio trees, Laurels, Pomegranates, &c.

We should convey but an imperfect idea of Oriental vegetation, if we did not enumerate the following species which compose the greater part of the forests. The names that are marked with an asterisk are such as have not been hitherto found in Europe or Africa.

Pinus halepensis, sylvestris, and Tournefortii*; Abies orientalis* and taxifolia, Larix Cedrus*; Juniperus drupacea, fœtidissima*, and phœnicea; Cupressus sempervirens, Taxus baccata, Betula alba and pontica*; Quercus Robur, Ilex, coccifera, pseudo-coccifera, rigida, infectoria*, Libani*, Haliphleos*, Tournefortii*, Ægilops, and Æsculus; Fagus sylvatica, Castanea vesca, Ostrya vulgaris, Carpinus Betulus and orientalis; Populus alba, nigra, tremula, and euphratica*; Salix babylonica, monandra, alba, fragilis, &c.; Platanus orientalis, acerifolia*, and crinita; Liquidambar imberbe*, Celtis australis and Tournefortii*, Ulmus campestris and effusa, Osyris alba, Elæagnus angustifolia; Vitex Agnus, Fontanesia phillireoides*; Fraxinus Ornus, excelsior, and rotundifolia, Arbutus Unedo and Andrachne, Diospyros Lotos, Styrax officinale; Tamarix orientalis, Africana, Germanica, and Gallica; Sambucus nigra, Cornus mascula; Pyrus Sorbus, Aucuparia, eleagnifolia, terminalis, salicifolia, Aria, &c.; Cratægus trilobata, Azarollus, tanacetifolia, &c.; Prunus avium, Cerasus Padus, &c.; Amygdalus incana and orientalis*, Mespilus germanica; Mimosa agrestis, Stephaniana, and Julibrissin*, Cercis Siliquastrum, Ceratonia Siliqua, Paliurus australis, Zizyphus vulgaris, Ilex aquifolium, Juglans regia*, Acer monspessulanum and heterophyllum, &c.

The Olive, the Terebinth, the Pomegranate, the Sweet Bay, the Oleander, the Myrtle, the Fig, and the Vine, follow the shores of the Black Sea through Pontus, Mingrelia, and Colchis, and appear on the coasts of the Crimea, from lat. 44° to 45° Reau. In these parallels, the lowest temperature scarcely reaches — 6°; but on the other side of the mountains which protect these countries from the northerly winds, the cold is so severe, that one might believe it was 4° or 5° nearer the pole.

As the Holy Land constitutes so important a feature in the dominions of Turkey, we cannot close this account of the Botany of that empire without noticing more particularly some plants for which Palestine is celebrated: "a land of Wheat and Barley, of Vines and Fig trees and Pomegranates, a land of Oil (Olive), and Honey;" and in innumerable other places do the Scriptures bear testimony to the abundant vegetable products of the country.

The size of the Grapes, mentioned in Numbers xiii. 23., of which "one cluster was borne by two men, upon a staff," might almost lead to a suspicion that the fruit was that of some other plant different from what we now call the Vine, were it not for the testimony of modern travellers. Stephen Schultz relates, that at a village near Ptolemais, he took his supper under a large vine, of which the stem measured a foot and a half in diameter; its height was about thirty feet; and, including its wide-spreading branches, which required to be supported, it formed a tent of above fifty feet in breadth and length. The bunches of grapes produced by this and similarly large vines weigh from ten to twelve pounds, and the individual berries are like small plums. When such a cluster is cut, the inhabitants place it on a table or board, about an ell and a half wide, and three to four ells long, and, several sitting around it, they pull off and eat the fruit. Christopher von Neitzschutz assures us that he has seen bunches of grapes in the mountains of Judea which measured half an ell long, and the berries were as long as two joints of the finger. This is corroborated by Mariti, who relates in his travels that none of the produce of the Vine, as it is known in other countries, can vie with the grapes of Judea and Syria, of which one man certainly could not carry a cluster far without destroying the fruit; thus rendering it probable that the spies conveyed the bunch between them, as much in order to preserve it entire, as on account of the weight, so that the beauty of the grapes might be fully seen in the camp of the Israelites.

With the grapes of the true vine must not be confounded the vines of Sodom and Gomorrah:—"For their vine is of the vine of Sodom and of the fields of Gomorrah: their grapes are grapes of gall, their clusters are bitter:" and again, "Wherefore, when I looked that my vineyard should bring forth grapes, brought it forth wild grapes?" This is supposed to be a species of Nightshade, which bears its berries in bunches, the Solanum Sodomæum; and according to Hasselquist produces the apples of Sodom spoken of by Josephus in his Wars of the Jews, which, besides their widely different properties from the vine, have the fruit frequently destroyed by the attacks of an insect, and thus rendered full of dust (see page 237.).

The fig tree (*Ficus Carica*) abounds in Palestine, and not in gardens only, but growing in open places. Besides the branch with one cluster of grapes, borne between two upon a staff, and brought by the men who were sent by Moses from Paran to spy out the land of Canaan, there were "Figs and Pomegranates." So that, if not aboriginals of the country

(and their native place has long been a matter of dispute), we know that these fruits existed there before the entrance of the Israelites. Josephus tells us that they have figs for ten months in the year; and it is certain that two or three crops are gathered annually. "For, lo, the winter is past; the rain is over and gone; the fig tree putteth forth her green figs," preparatory to the first crop, which sets about the spring equinox, and ripens about June: these are reckoned great delicacies, and are of short duration, as expressed in Isaiah, "The glory of Ephraim shall fade like the early fruit" (figs?). Jeremiah saw in a vision "a basket of figs that were very good, like early figs." The summer figs set in the middle of June, when the early ones ripen, and are themselves in perfection in August. The third crop is ready late in the autumn, when the tree has shed its leaves. In mild winters, fruit may be found on the trees even so late as January. Figs are eaten both fresh and dried. To render the fruit more certain of ripening, the process of caprification has been employed; and the advantage of this is very evident, when we consider the true nature of the fig. What we commonly esteem the fruit of a fig is no fruit at all, any more than the substance which is eaten of the common artichoke. Both of them are receptacles, or a fleshy base, upon which a number of florets are inserted. In the artichoke, the receptacle is plane, or nearly flat; and, consequently, all the florets that are placed upon the receptacle are visible without dissection. Now, the fleshy part of a fig, that part which so much resembles a pear, is also a receptacle, but hollowed out in the centre in a very curious and peculiar manner: and on the surface of that hollowed part are innumerable florets, male or female, or sometimes both, within this common receptacle. And the whole is so closed at the top, that it may easily be supposed that, in the case of the receptacle containing only female flowers, the male dust could hardly find access to them; and if there be mixed flowers, a more free passage for the air must be requisite. Even in France, it is well known that the quality of a fig is improved by making perforations in the top of it. The Eastern nations do more than this. Caprification is by them performed by going to the woods, and thence collecting from the wild fig trees a little insect which is very abundant, a species of Cynips, and bringing it home to their cultivated figs. These minute creatures fall to work directly, piercing the fruits, in order to deposit their eggs within them; and fluttering from one to another, with their limbs and wings all charged with pollen, they by this means convey fertility to the otherwise barren pistils.

The sycamore tree (*fig.* 540.) of Scripture, into which Zaccheus climbed, must not be confounded with the tree so called in our country. It is a species of fig (*Ficus Sycamorus*), and is sometimes termed the Wild Fig tree; although it is the true sycamore, its name being derived from *sycos*, a fig-tree, and *moros*, a mulberry. The prophet Amos says, "I was no prophet, neither a prophet's son; but I was an herdsman, and a gatherer of sycamore fruit." From this and from other passages in Scripture, it may be inferred, that this tree was of very great importance among the Jews; although its fruit is extremely inferior to that of the true fig, for it has a disagreeable bitterness; nay, it is said by Pliny and other naturalists to be intolerably nauseous, until rubbed with iron combs, after which it ripens in four days. This evidently alludes to the process of caprification. Theophrastus observes, that, when the fruit is mature, it should be pulled some days before it is eaten. Abdollatif says, that, previous to gathering the figs, a man ascends the tree with a punch and pricks all the fruits with it, one after another: a kind of milky fluid oozes from this opening, and the wounded part afterwards turns black, and in a few days after the fruit becomes sweet and fit for use. This is indeed the only one (besides the *Ficus Carica*) of all the 120 species of Fig, of which the fruit is eatable, and a vast quantity is consumed by the Arabs and the natives of the Levant. It forms a large tree, said to be among the loftiest in Palestine, with heart-shaped angular leaves, whose wood is of considerable value, and alleged to be indestructible; of this we have a proof in the fact of the Egyptian mummy-cases being made of this wood. And so abundant were these trees in Palestine, that, in allusion to the building of the temple, it is stated that Solomon "made cedars to be in Jerusalem as the sycamore trees that are in the valley for abundance:" so plentiful, indeed, were they, that "David set overseers over them, and over the olive trees that were in the low plains he set Baal-hanan the Gaderite." Yet they were sometimes destroyed by the frosts. The fallen state of the Jews, and their future prosperity, are thus typified by Isaiah:—"The bricks are fallen down, but we will build with hewn stones; the sycamores are cut down, but we will change them into cedars."

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Sycamore.

The pomegranate (*Punica Granatum*) is common in Syria and Palestine, particularly in all the gardens of Aleppo. The ripe fruit is in abundance in August, and is then laid up for a winter stock. There are three sorts; a sour kind, a moderately sweet kind, and a very sweet kind. The juice of the first is used instead of verjuice, or the juice of the unripe grapes. The others are eaten at table, after being cut open, the seeds taken out, strewed

with sugar, sprinkled with rose-water, and served up on little plates. The pomegranates, on account of their round and graceful figure, formed a frequent ornament in the chapiters of the building of the Temple:—"And the chapiters upon the two pillars had *pomegranates* also above, over against the network; and the pomegranates were 200, in rows round about." They were also embroidered upon the hem of the high priest's ephod. A wine is sometimes extracted from these fruits, and probably was so by the ancient Jews, as may be inferred from the word "Gath-Rimmon," signifying "the press of pomegranates." The seeds, according to Russell, constitute an important culinary article, being used for conserves and syrups. This fruit was much prized by the Israelitish people, as appears not only by its description among the products of the land of Canaan, but also by the murmuring of the tribes when they came into the desert of Zin. "Wherefore," said they, "have ye made us to come out of Egypt into this vile place? It is no place of seed, or of figs, or of vines, or of pomegranates." We must not judge of the Pomegranate from the stunted specimens cultivated in cold climates; in warmer countries it constitutes a tree, and several towns and places have derived the name of "*Rimmon*" from the abundance or excellence of this production. "Saul dwelt at Gibeah, under a *pomegranate tree* which was in Migron." The bark has been used in dyeing, and yellow morocco leather is thus stained.

The "*husks*," in Scripture, which "the swine did eat," in the affecting and beautiful parable of the Prodigal Son, in Greek κεράτια, are generally, and with much propriety, considered to be those of the fruit of the Carob tree, or Locust tree (*fig.* 541.) (*Ceratonia Siliqua*); sometimes called St. John's Bread, from an idea that its fruit was the Locusts eaten by the forerunner of our Saviour; but as Locusts have from time immemorial been the food of the people of the East, that word may, very fairly, be taken in its literal sense. The Carob forms a middle sized tree, not unfrequent in the gardens of the curious in England: it belongs to the natural family Leguminosæ, having large pinnated leaves, with inconspicuous flowers, rather large pods, and seeds embedded in pulp. The husks are still commonly employed for feeding cattle in Palestine, after the seeds are taken out, and the juice is pressed from them, which is much esteemed, and used for preserving fruits. Mixed with liquorice root, dry grapes, and other fruit, the Mussulmans make sherbet of it, and it is with them an article of daily consumption. The pulp, too, is eaten after the seeds have been thrown away: it is dried in the sun, acquires a pleasant flavour, and contains a great deal of saccharine matter. The leaves and bark are used for tanning skins.

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Fruit of the Carob Tree.

The Palm tree of Scripture, generally spoken of, is the Date Palm (*Phœnix dactylifera*), and its fructification requires the assistance of art. Theophrastus and Pliny allude to this process in terms which go to prove that the ancients had some knowledge of the sexes of plants, and the fertilisation of vegetables. In the East, and in Barbary, as soon as the Date trees begin to flower, the inhabitants carefully collect the male clusters before the pollen has escaped, and, climbing to the top of the female trees, they shake the male blossoms over them; and then fasten some bunches of male flowers in the middle of the female ones. By this process the successive fecundation of the several clusters of the date, which appear one after another, is ensured. The Date trees of Cairo, says Delile, in his *Flora of Egypt*, bore no fruit in the year 1800, because they had not been fertilised as usual. The French and Mussulman troops were at war during the spring, and the labours of the agriculturist had ceased in the desolated plains. Thus the pollen of the Date trees, scattered by the wind, instead of being artificially carried, as was customary, to the female trees, failed to fecundate a single cluster of cultivated dates: but its influence was seen on the wild Date trees, several of which, though at considerable distances, bore fruit, though this fruit was so small and sour as to be unfit for food. The poet Pontanus has sung in glowing terms the history of two Date palms, of which the female was cultivated at Otranto, and the male at Brindisi; that is, at a distance of fifteen miles from one another. In spite of this immense interval, the Date tree of Otranto was fertilised by the other tree, and produced an abundance of delicious fruit. The winds performed the task of conveying the fecundating dust from the male tree into the young ovaries of the female. Many similar instances are recorded. Four or five months after the fertilisation has taken place, the Date trees begin to bend under the weight of their bunches of ripe fruit. The number of these clusters varies considerably. There are generally three or four on each tree, though some individuals have produced ten or twelve. Each weighs from twenty to fifty pounds. Before the fruit has acquired its full size, it is requisite to raise the clusters, and tie them to the base of the leaves, so that they may not be shaken and bruised against one another by the force of the wind. The dates must be gathered some days before they are perfectly ripe, or they speedily decay and ferment. When it is desirable to keep them for any length of time, they are spread on mats and dried in the sun, and these are the dates that are sometimes seen in Europe. But the fruit, so parched, gives a very inadequate idea of the sweet and agreeable flavour that is found in the

ripe and freshly gathered dates. They also prepare a kind of paste, by pressing the fruits very hard, and putting it in baskets made of the leaves of the tree, which are generally carried by the caravans. Jericho was called the city of Palms, from the number of Date trees in the neighbourhood; but they are now comparatively rare. They were emblematic of Palestine on the Roman coins, "where lone Judea wept beneath her palm," with the inscription "*Judæa Capta.*" We shall not enter into a history of the uses of this celebrated and most valuable plant, for that may be found in various well-known publications; but we shall content ourselves with observing, that, on account of its evergreen foliage, it has been considered by the Psalmist as an apt emblem of the flourishing and happy state of "the righteous," who "shall flourish as a palm tree;" and that palm branches or leaves (for palms have no branches) have been borne as indicative of joy and festivity, as is often mentioned in the book of Maccabees; and when our Saviour entered Jerusalem, the people "took branches of the Palm tree, and went forth to meet him." At the feast of Tabernacles, the Jews, as is well known, had a divine command to employ "goodly palm branches" in the erection of booths; and to this day, on the celebration of that festival, the Jews try, by every means, to procure dried ones, when living remote from the countries where they grow. In one part of the south of France, the sale of these leaves forms a staple article of trade. The village of Bordighiera, situated on an eminence sheltered towards the north by the Apennines, presents from a distance, the aspect of a tropical spot, on account of the numerous Date trees which surround it. These are from forty to forty-five feet high; their fruit is seldom ripened sufficiently for eating; and it is for the sale of their leaves that these trees are cultivated. They are sold at two periods of the year, in spring for Palm Sunday, and in September for the Jewish Passover. It is chiefly to the coasts of Italy, to Rome and Naples, that the palms of Bordighiera are sent. Those gathered in autumn, and destined for the use of the Dutch Jews, who adhere strictly to the letter of the law, yet cannot obtain recent Palms, fetch a high price; they are sent off in parcels of 600, at about 50 cents each. Many vessels are annually employed in this trade.

The Olive (*Olea*) attains to a large size in Palestine, and the country has been considered eminently blessed for the abundance of this tree, and for the excellence of its oil, which the Israelites conveyed to the markets of Tyre. Solomon is said to have ordered to the workmen that king Hiram sent him, besides other provisions, 20,000 baths of oil. But the oil here spoken of, is supposed to have not been expressed from the cultivated olive. Schultz found near Jericho, in the bed of a brook that was dried up, several wild Olive trees, whose fruit was as large again as that of the cultivated kind, and from these the natives extracted an oil, which they used not for food, but as medicine.

The Cedar (*fig.* 542.) must not be omitted in an enumeration of the interesting plants of the Holy Land; it is a fir of the group of Larches, and hence called by some authors Pinus Cedrus, and by others Larix Cedrus. It is remarkable for its stately size, its wide-spreading fan-like branches, and its not deciduous leaves, in which latter particular it differs from the other larches. It is a native of several places in the Levant, and especially of the famed Mount Lebanon, which has been celebrated from the most ancient times for its cedars. The temple of Jerusalem and the royal palace there were built of this wood; and in the last structure, so great a quantity of this tree was employed, that it was called the House of the Forest of Lebanon. Masts of ships were made of it at Tyre; and so important was it to the ancient Jews, that the Psalmist compares the boughs of "the vine brought out of Egypt" to the cedars of God ("goodly cedars," in our translation). Pococke measured a stem that was twenty-four feet in circumference. Abundant as were the cedars in Lebanon during the days of Solomon, they are now greatly reduced, and confined to the steep declivity of the more elevated parts of the mountain, in the neighbourhood of the Carmelite monastery of St. Sergius. Mayo, in the summer of 1813, calculated the number of trees, of which this grove consists, at 800 or 900 large and small. Among them were nine principal cedars, whose circumference, at four feet from the ground, was nearly twenty feet; so that it is with some justice that Professor Martyn has remarked that there are probably now more cedars in Britain, than there are in all Palestine. It is hardly necessary to remark, that the cedar wood, of which pencils are made, is not the produce of this tree, but a species of Juniper (*Juniperus virginiana*), called the red cedar.

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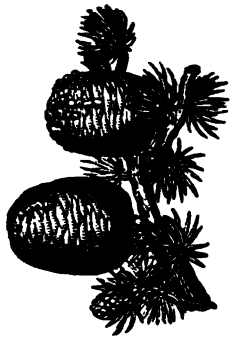

Cedar.

The Terebinth tree (*fig.* 543.) is often mentioned in Scripture: this is the Pistachia Terebinthus of Linnæus, if Celsius be correct in calling the Oak of our translation his Terebinthus judaica; and Rosenmüller, to whom we are indebted for much valuable information respecting the natural history of Scripture, informs us that the words El-Elah, in our Bible rendered oak, are particularly applied to the Terebinth. Jacob buried the idolatrous images that his family brought from Mesopotamia under a Terebinth tree. An angel appeared to

Gideon under a Terebinth tree. It was in a valley of Terebinth trees that Saul encamped with his host, and under one of them were he and his sons buried. Absalom hung upon a Terebinth tree, and Isaiah threatens the idolaters (ch. i. v. 30.), that they shall be as a Terebinth tree whose leaves fall off; that is, being an evergreen, when the tree dies. On account of the great age, to which it lives, it is employed metaphorically to indicate the prosperous and enduring state of the Jews when they were to be again restored. One of them, under which Deborah is said to have dwelt, according to Josephus, was shown near Hebron at the time of St. Jerome. Towards the middle of the seventeenth century, between Jerusalem and Bethlehem stood an old tree, under which tradition relates that the

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Terebinth.

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Plane Tree.

Virgin Mary rested, when she went from Bethlehem to Jerusalem, to present her son in the Temple; and this was equally venerated by the Mahometans as by the Christians: but in 1646 it was accidentally destroyed by fire. The wood of the Terebinth tree is white, hard, and abounding in resin. The turpentine is obtained by making incisions, which should be done annually, else the accumulated fluid swells, and finally bursts and destroys the tree. From the neglect of this practice, Terebinth trees, which used to be so frequent in Judea, are now become of rare occurrence.

Gladly as we would enlarge upon the subject of the plants of the Holy Land, want of space compels us to be brief. The Plane tree (*Platanus orientalis*) (*fig.* 544.) is abundant in Palestine, and is supposed by some commentators to be the same as the poplar, which yielded the rods that Jacob placed before the sheep in the watering troughs. The thorns with which our blessed Lord was crowned were the spiny branches of Zizyphus Spina Christi (*fig.* 545.), a frequent inhabitant of the Holy Land. Among the plants producing odoriferous gums or oils, of which the Balsam, or Balm of Gilead, or of Mecca, is the most celebrated, are the Amyris gileadensis (*fig.* 546.) and A. Opobalsamum of Linnæus; but

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Spina Christi.

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Amyris Gileadensis.

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Galbanum.

these do not appear to be natives of Syria or Palestine, whatever they may have been of Arabia, the peculiar country of the precious balsams. Strabo, indeed, mentions a balsam garden at Jericho; and Judah is said in Scripture to have traded in wheat, oil, and *balsam* (or resin, as the margin has it); but whether the Amyris or not, must admit of great doubt. Gum ladanum is yielded by Cistus Ladaniferus, and is supposed to be the Lot of the Hebrews, and among the spices which the Ishmaelitish merchants brought from Gilead to

Egypt. It is a beautiful and well-known plant in gardens. The gum or resin is found on the branches, and being soft and clammy early in the morning, the goats are driven in among the plants, and it adheres to their beards. Myrrh and frankincense are the products of Arabian plants. Galbanum (*fig.* 547.), an ingredient in the incense of the sanctuary, was procured from the Bubon Galbanum, an umbelliferous plant of Syria. What particular Rose, "the Rose of Sharon," and the "Rose plant in Jericho," is, it is perhaps impossible to conjecture. The plant, vulgarly known under the name of the Rose of Jericho, is no rose at all, but a small cruciferous plant, a native of the deserts of Arabia, the Anastatica hierochuntica (*fig.* 548.). After flowering, and when the seeds approach maturity, this plant dries up, its leaves fall, the branches, which are rigid and thorny, shrink together, and form a kind of round tuft, about the size of a man's fist. In this state, the Anastatica is driven by the winds, which tear it up by the roots, across the deserts, and as far as the sea shore, and is brought to Europe, where it is designated as the Rose of Jericho or hygrometric Jerosa. The most ridiculous fables were invented respecting this plant, at a period when superstition greedily received them. It is an undoubted and remarkable fact, that the Rose of Jericho opens and extends its branches when immersed in water, or when the atmosphere is very damp, and resumes its former appearance when exposed to the wind or to heat.

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Anastatica Hierochuntica.

To sum up all in the words of Malte-Brun, speaking of the state of the country, and of its most useful productions:—"It has been remarked, that if the advantages of nature were duly seconded by the efforts of human skill, we might, in the space of twenty leagues, bring together in Syria all the vegetable riches of the most distant countries. Besides wheat, rye, barley, beans, and the cotton plant, which are cultivated everywhere, there are several objects of utility or pleasure, peculiar to different localities. Palestine, for example, abounds in Sesamum, which affords oil, and in Dhoura, similar to that of Egypt. Maize thrives in the light soil of Baalbec, and Rice is cultivated with success along the marsh of Haoulé. Within these twenty-five years the Sugar canes have been introduced into the gardens of Saide and Beirout, which are not inferior to those of the Delta. Indigo grows, without culture, on the banks of the Jordan, and only requires a little care to secure good quality. The hills of Latakia produce Tobacco, which creates a commercial intercourse with Damietta and Cairo. This crop is at present cultivated in all the mountains. The White Mulberry forms the riches of the Druses, by the beautiful silks which are obtained from it: and the Vine, raised on poles, or creeping along the ground, furnishes red and white wines, equal to those of Bordeaux. Jaffa boasts of its Lemons and Water-melons; Gaza possesses both the Dates of Mecca and the Pomegranates of Algiers. Tripoli has Oranges which may vie with those of Malta; Beirout has Figs like Marseilles, and Bananas like St. Domingo; Aleppo is unequalled for Pistachio nuts; and Damascus possesses all the fruits of Europe, Apples, Plums, and Peaches growing with equal facility on her rocky soil. Niebuhr is of opinion that the Arabian Coffee shrub might be cultivated in Palestine." (Vol. ii. p. 130.)

Subsect. 3.—*Zoology.*

The native zoology of Asiatic Turkey does not present us with any remarkable species that are not equally found in the adjacent extremities of Africa and Asia. The lion was once common in Syria, and, according to Oppian, formerly over-ran Armenia; but this formidable creature is now, as M. Cuvier observes, almost confined to Africa and some parts of Asia. We have determined the fact of the African Lion (*Leo africanus* Sw.) being a distinct species from that of Asia, which we have therefore named *Leo asiaticus*. Angora is celebrated for its peculiar breeds of goats and of cats.

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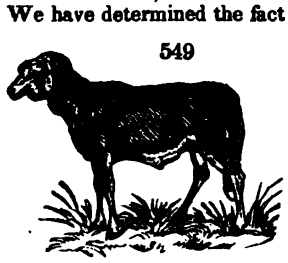

Angora Sheep.

The Angora Goats are very beautiful: the hair, mostly white, is long and soft, and much esteemed for fabricating shawls and other dresses: it has long buff-coloured ears, and the horns, pointing upwards, have a spiral turn.

The Angora Sheep (*fig.* 549.) are also peculiar. There are three breeds, all well proportioned, called Coquo Muana, Coquo, and Zomba, in all which the horns are small. The Coquo has the finest wool, that of the others being more hairy. They all have very long tails, but the ears are horizontal.

The cats are much larger than ours, with beards like the lynx, and, although seldom seen in this country, are common in the houses of Paris.

SECT. III.—*Historical Geography.*

To detail the revolutions of the countries now comprehended in Asiatic Turkey would be little less than detailing those of the world. Down to the capture of Constantinople by the Turks, in 1453, they were the scene of the greater part of the events which decided the fate of mankind. These revolutions, indeed, are so well known, that it is scarcely necessary even to indicate them to the intelligent reader. First to be noticed are the numerous little states in Canaan subdued by the Jews, and those which continued as their neighbours. At last Judea absorbed nearly all these states, and had for its enemy only Syria, and for its friendly neighbour, Phœnicia, with its splendid commercial capital, Tyre. In Asia Minor we find a similar multitude of small states,—Ionia, Æolis, Lydia, Caria, and many others. Then comes the era of the great empires, commencing with Assyria, and continued by Babylon, both founded in this region, and both yielding to the Persian empire, which, under the conquering arms of Cyrus, extended itself beyond any former state; reaching over all western Asia, including Egypt, and attempting to overpower Greece. But its contests with this last power had a fatal issue. The phalanx of Macedon, trained by Philip and led by Alexander, overthrew at one blow this colossal but ill-compacted and enfeebled power; and a Greek empire was established from the Nile to the Indus. When that mighty mass of conquest went to pieces with the sudden disappearance of its head, the kingdom of the Seleucidæ was formed, which included nearly the whole of what is now termed Asiatic Turkey, with the exception of some portion of Asia Minor. Amid the confusion of wars and contests which ensued among Alexander's successors, Asia Minor became not only independent, but the seat of some very potent and celebrated monarchies,—Pergamus, Pontus, Armenia; each of which might have even aimed at general monarchy, had not a mightier foe appeared in the field. To Rome all the nations that had ruled Asia were destined to bow; yet none maintained a harder struggle, or fell with greater glory, than Antiochus, Mithridates, and some others of these kings newly risen to greatness. Asia Minor, Syria, Judea, were completely reduced to the condition of provinces; but whenever her legions attempted to pass the desert, and were involved in the wide plains beyond the Euphrates, they were enveloped by the flying clouds of Parthian cavalry, and their career was closed with signal disaster. Western Asia, under the Roman government, enjoyed for many centuries a peaceful and voluptuous repose. This was broken, in the seventh century, by that mighty revolution which has changed the whole aspect, moral and political, of the Eastern world. The empire of the caliphs, established at Bagdad, soon ruled, with absolute sway, Syria and Assyria. Even after this original kingdom had yielded to the pressure of those numberless hordes who, under the appellation of Turks or Toorks, poured down from the northern interior of Asia, they all equally fought under the law and standard of Mahomet. The vanquished were either compelled to embrace his religion, or reduced to a subject and degraded class, deprived of almost all the rights of humanity. These successive irruptions continually hemmed in more closely the Eastern Empire; and, even after the Turkish power seemed completely fallen, it broke forth under the Ottoman dynasty with increased vigour. At this era, however, the progress of Moslem domination received a temporary check, by that series of powerful expeditions from Europe so celebrated under the title of *crusades*. The crescent was, for the time, humbled: Jerusalem was rescued, and erected into a kingdom, which subsisted for about a century. At length all the Christian powers in the East gave way before the victorious arms, first of Saladin, and afterwards of Mahomet and Selim. In the course of the fifteenth century, all that part of Asia of which we are treating terminated its long series of revolutions by becoming a portion of the Turkish empire: it has ever since been subject to the degrading and brutalizing sway of this empire, and of the austere and bigoted religion on which it is founded. Under this influence, that grandeur and prosperity which rendered it the most celebrated region of the world has entirely disappeared. Volney, who traversed it with the eye of a philosophic observer, has painted its downfall in the most eloquent and affecting terms. "Everywhere," says he, "I saw only tyranny and misery, robbery and devastation. I found daily on my route abandoned fields, deserted villages, cities in ruins. Frequently I discovered antique monuments, remains of temples, of palaces, and of fortresses; pillars, aqueducts, and tombs: this spectacle led my mind to meditate on past times, and excited in my heart profound and serious thought. I recalled those ancient ages, when twenty famous nations existed in these countries; I painted to myself the Assyrian on the banks of the Tigris, the Chaldean on those of the Euphrates, the Persian reigning from the Indus to the Mediterranean. I numbered the kingdoms of Damascus and Idumea, of Jerusalem and Samaria, the warlike states of the Philistines, and the commercial republics of Phœnicia. This Syria, said I, now almost unpeopled, could then count an hundred powerful cities; its fields were covered with towns, villages, and hamlets. Everywhere appeared cultivated fields, frequented roads, crowded habitations. What, alas! is become of these ages of abundance and of life? What of so many brilliant creations of the hand of man? Where are the ramparts of Nineveh, the walls of Babylon, the palaces of Persepolis, the temples of Baalbec and Jerusalem?

Where are the fleets of Tyre, the docks of Arad, the looms of Sidon, and that multitude of sailors, of pilots, of merchants, of soldiers? Where are those labourers, those harvests, those flocks, and that crowd of living beings, which then covered the face of the earth? Alas! I have surveyed this ravaged land. I have visited the places which were the theatre of so much splendour, and have seen only solitude and desertion. I have sought the ancient nations and their works, but I have seen only a trace, like that which the foot of the passenger leaves on the dust. The temples are crumbled down; the palaces are overthrown; the ports are filled up; the cities are destroyed; and the earth, stripped of its inhabitants, is only a desolate place of tombs." Although this picture is overcharged in some of its features, its general character applies but too truly to the region now before us.

Sect. IV.—*Political Geography.*

The principles and mode of government are exactly the same in Asiatic as in European Turkey. The pachas, invested with the command of extensive territories, receive entire the power of the original despot from whom they derive their appointment. Their distance, indeed, affords them much more ample opportunities of acting independently, and of merely transmitting to the Porte such an amount of tribute and military aid as they can conveniently spare. Even Asia Minor, which is now the centre of Turkish power, has been the seat of formidable rebellions; and Paswan Oglou long governed an extensive tract of its eastern districts with little or no control from the Porte. The more remote pachalics of Acre and Bagdad have almost completely shaken off the yoke. The independence of the former dates from Daher Omar, in the middle of the last century, and was maintained still more completely under the ferocious Djezzar. Since the period first mentioned, the Porte has derived neither force nor revenue from an appanage which includes nearly the whole of the ancient Judea. A similar independence was earned by Ahmed, Pacha of Bagdad, after his gallant defence of that city against Nadir Shah, and afterwards against his successor Solyman. In 1810, indeed, the Porte succeeded in supplanting the reigning pacha by a creature of its own, who, however, effected the expulsion of his rival only by collecting a band of hardy Kurd mountaineers, who form at present the ruling power in Bagdad. In general, after a year or two of possession, a game begins between the Porte and the new pacha; the latter endeavouring to shake off his dependence, while the former strives to terminate the refractory vassal's life by the bowstring; and notwithstanding the decayed and decrepit state of the sultan's power, yet, by incessant perseverance, and by throwing his weight in the scale of a rival candidate, it has usually succeeded in the end. The Pacha of Egypt has recently wrested Syria from the Porte, upon whom he retains only a nominal dependence.

This imperfect and precarious independence is, generally speaking, the reverse of an improvement in the condition of the unfortunate people. The pacha rules with as complete and tyrannical a sway as the sultan: he is rendered cruel by the dangers by which he is surrounded; and careless of the welfare of his district by the precarious tenure on which his place is held. In order to maintain his power, he takes into pay the brave but fierce and predatory inhabitants of the mountains, and must secure their attachment by allowing them liberty to commit plunder and outrage. According to Volney, they raise a prosecution in one place against a rich man, and strip him under a specious pretext; in another, they hire false witnesses, and impose a contribution for an imaginary fault; they foment everywhere the enmities of sects, and encourage them to give informations against each other, in order to afford a pretext for *avanies*. Thus their imprudent avarice collects into one heap all the riches of a country. When the government pretends to avenge the oppressed people, it snatches to itself the spoil from the hands of the oppressor, and sheds his blood uselessly for a crime of which itself is the accomplice, and by which it profits.

Sect. V.—*Productive Industry.*

The causes which have rendered abortive the vast capacities given by nature to this region for the production of almost every species of wealth, have been sufficiently explained in the preceding section. It is true that all these countries have, from the earliest ages, been distinguished rather by agricultural industry, and the rearing of cattle, than by the finer manufactures, which they have been accustomed to receive by caravans from the great empires of the East. In most of its districts, however, culture is rendered insecure by the oppression of the pachas, and the ravages of the Arabs, against which the government cannot, or at least does not, afford protection. Hence, in many parts, particularly in the tracts behind Jordan and Lebanon, and in Mesopotamia, which were formerly covered with the richest harvests, no trace of fertility remains, except only in their overgrown and deserted pastures. The upper tracts of Asia Minor and Armenia, where horses and cattle are reared, are both less exposed to inroad, and better able to defend themselves, though they too often abuse their strength to plunder the inhabitants of the neighbouring plains. Here, however, is produced the fine goat's hair or Mohair of Angora, which is sought in Europe as a material of some valuable manufactures.

The manufactures of Asiatic Turkey are chiefly of an ordinary kind, coarse, and for inter-

nal consumption only. Yet silk, cotton, leather, and soap are staples of the Levant; and the two latter find a place in the markets of Europe. Finer specimens, however, of all these commodities seem to be afforded from the cities of Barbary. The manufacture of Damascus blades, so famed in the middle ages, ceased from the period when Timour carried to Tartary the artisans employed on them. At Tokat there is a great fabric of copper vessels. The women among the wandering tribes in the upper districts weave the admired Turkey carpets; but the finest are made in the mountain districts of Persia.

No part of the world appears more expressly destined to be the seat of an extensive commerce. The command of the Mediterranean, the numerous coasts and islands by which it is surrounded, its position at the connecting point of the three continents, and its contiguity to countries whose dissimilar tastes and productions peculiarly fit them to supply each other's deficiencies, are advantages which naturally rendered it the earliest and most favoured seat of commerce. The splendour of its ancient emporia excited the astonishment of the world; and they continued for a lengthened period, notwithstanding the hostile influence of revolution and oppression, to preserve a considerable portion of their early commerce and magnificence. These, however, have at length almost totally disappeared. Only Aleppo and Smyrna survive; the former supported by Syria and the caravan trade of interior Asia, by which at one time it received even the muslins and jewels of India. Since the discovery, however, of the passage by the Cape of Good Hope, the Indian trade has taken almost wholly a different route. The internal distractions which agitated Persia for half a century rendered the intercourse with that empire both dangerous and unprofitable. Through these causes Aleppo, once the chief seat of commerce in the Levant, has suffered a great decline. Smyrna, as it carries on merely the local commerce of Asia Minor, the part of the empire which has suffered least by anarchy and rapine, still maintains a respectable place as a trading city. It exports raw silk, goat's hair, Turkey carpets, raisins, drugs, and gums, in exchange for the cloths and hardware of Europe. (There is a very full account of the trade of Smyrna in M'Culloch's *Commercial Dictionary*, under the head SMYRNA.)

SECT. VI.—*Civil and Social State.*

The state of social existence, religion, learning, and manners, so far as respects the ruling people, is precisely the same in Asiatic as in European Turkey. They present that austere, uniform, and gloomy character, which the precepts of Mahomet tend to form, and which is produced in its utmost purity in the cities of Turkey. The native and subject races, however, exhibit marked distinctions. The Greek population, which in Europe makes the prominent feature among the conquered people, exists only to a limited extent on the coasts and islands of Asia Minor. In its room all the mountainous Asiatic tracts contain bold and hardy tribes, who, availing themselves of their distance and the declining power of the pachas, admit little control over their internal proceedings, and establish independent and sometimes almost republican governments.

The high and uncultivated table-lands in the interior of Asia Minor are occupied by a wandering and pastoral race called Turcomans, either because they are really descended from the people of that name on the east of the Caspian, or perhaps, because a similar situation, producing similar habits and aspect, has caused the two to be confounded. They drive their flocks in summer into the most elevated tracts, and, as winter approaches, lead them down into the lower and sheltered valleys. All their habits are decidedly Tartar; and with the domestic simplicity of this race they combine its love of war and booty, with no nice consideration how this latter may be obtained. When summoned, however, to fight under the banner of the empire, and to unsheath the sword against the infidels, they are prompt in obeying the call, and form the main military strength of Turkey. They serve a short campaign without pay, but with little ardour, and with full license of plunder. Though they cannot meet disciplined troops in the shock of battle, they make excellent irregular cavalry.

Syria, Palestine, and Bagdad have attracted great numbers of Arabs from the vast deserts by which these countries are bordered. Besides those who make inroads for the sake of plunder, or who drive their flocks, with or without permission, into these more fertile pastures, there are many who have obtained a fixed settlement in the fields or the cities, and have become regular subjects of the empire. These conform to established manners, and have a more gay and polished address than the Turks. Many of them become thriving merchants; but they never forget those long genealogies, that respect for the beard, and admiration for the horse, which form the pride of the Arab in his native desert.

The steep and rugged heights of Lebanon have given shelter to races of quite a different character from the wandering or the settled Arabs. Those high slopes, unfit for pasturage, are made, by the laborious culture of the people, to yield them subsistence; they fight on foot with the musket; they have, what is most rare in Asia, national assemblies, with some form of republican government. Among these mountain tribes, the chief are the Maronites and the Druses.

The Maronites were originally the proselytes of Maron, a saint of the fifth century; but being stigmatised as heretics, they, in the seventh century, sought refuge, under a distinguished leader called John the Maronite, in the hilly country of Kesrouan, behind Tripoli. Here, when the Saracens over-ran Syria, carrying on a war of fierce persecution against the Christian name, the Maronite territory became the retreat of many who were willing to sacrifice all for the free exercise of that religion. Having procured arms, they bravely defended themselves, and the Mahometans were unwilling to waste their time and resources on a territory so difficult and so poor. By degrees they not only freed themselves from subjection of every kind, but, availing themselves of favourable occasions, made inroads into the surrounding territories, and carried their arms even as far as Jerusalem. At length Amurath III., a fierce and active prince, became indignant at seeing his power thus braved. In 1588, he collected a large force, penetrated into their territory, and compelled them to acknowledge the supremacy of the Porte, and to bind themselves to the payment of an annual tribute, which has ever since been paid, or at least owned as due. In every other respect, they endure scarcely any control. The Catholic rites are celebrated as publicly in Kesrouan as in Italy. Of the numerous villages built on the sides of the hills, each has its priest, its chapel, and its bell. The Maronites, notwithstanding their deviations from strict orthodoxy, have been received into the communion of the church of Rome, which nothing could ever induce them to renounce, and which connives at their retaining a patriarch of their own, who resides at the monastery of Kanobin. Kesrouan contains upwards of 200 convents; but as the monks till the ground, and have brethren capable of carrying on all necessary handicraft trades, they cannot be ranked as useless members of society. The numerous priests are supported solely by the bounty of their flocks, which they are obliged to eke out by the cultivation of land, or the prosecution of a trade; even the bishops do not usually enjoy a revenue of more than sixty guineas a year. For this poverty, the clergy are compensated by the great respect paid them by the people, who kiss their hands whenever they meet them. The Maronites, in general, live in a happy simplicity, in rude hamlets or solitary houses, among the acclivities of Lebanon. They recognise no distinctions of rank. Those, indeed, whom they call *sheiks*, or, as we would say, little gentry, have a few advantages of dress and food, but live in the most frugal manner; while very few are in want of the absolute necessaries of life. They have scarcely any form of government; the villages forming so many little communities, secured by simple and peaceful habits from those evils which, elsewhere, the sword of justice must remedy. When, however, any outrage is committed, they unfortunately assert and exercise the Arab right of private vengeance. The Maronites are all armed, and, when their strength is called out, can muster 35,000 men, on which Volney calculates the entire population at 115,000: we should rather suppose it 150,000.

The Druses, who occupy the more northern and still loftier heights of Lebanon, are a people of much rougher aspect, and all the religion they have is of the Mahometan species. The notions that they derive their origin from the crusaders, and their name from the Count de Dreuse, are now completely exploded. Their creed is traced to Hakim, one of the Fatimite caliphs of Egypt, who, in the tenth century, commenced a radical reform of the Mahometan religion. In this career, he cut off at once all its peculiarities; the prohibition against eating pork and drinking wine, the pilgrimage to Mecca, the observance of fasting, and the recital of the five prayers. Unfortunately he extended this latitude to essential points of moral duty, permitting even incestuous marriages, and finally erecting a worse superstition than that which he had overthrown, by setting himself forth as an incarnation of the Deity. He finally fell a victim to the enraged multitude, whose opinions he trampled upon; but his dogmas, and even his wildest personal pretensions, spread throughout Syria. They were proscribed, however, as monstrous and heretical by the prevailing part of the Mahometan world; and their adherents, like the Maronites, were obliged to flee into the recesses of Lebanon. Being reinforced by other heretical sectaries, they proved extremely formidable, till Amurath III., in the same expedition in which he reduced the Maronites, compelled the Druses also to bind themselves to the payment of an annual tribute. He stipulated, moreover, that, instead of living in a species of anarchy under their sheiks, they should choose, subject to the approbation of the Porte, a prince or *emir*, who should be responsible for their peaceable deportment, and the regular payment of the tribute. This arrangement, however, had a result opposite to what was contemplated. It gave to the nation an union before unknown; the consequence of which appeared very obvious, when Fakr-el-din, or Facardin, founded a sort of kingdom of the Druses. Having taken Bairout, he made it the capital, and such it has ever since continued. Having been induced, however, to visit Italy, he contracted voluptuous habits, unsuited to Oriental ideas, which weakened his influence, and led, finally, to his captivity and death. The Druses, however, continued to be ruled by his family, till it became extinct, when another was established in its place.

The Druses derive from their independence an energy and a vigour of character unknown to the other nations of Syria. A considerable part of the land is in the possession of a few great sheiks, whose factions often embroil the natives, but at the same time maintain a

spirit of liberty and activity. All the great affairs of the nation must be decided in an assembly of these sheiks, at which even peasants are allowed to be present, and to give their voice; so that this government presents a mixture of powers somewhat similar to that existing in the British constitution; but it wants the fixed laws and established order which secure the latter against anarchy. The Druses are prompt in flying to arms. As soon as a hostile resolution is formed by the assembly of the nation, the criers, from the tops of the mountains, sound "To war! to war!" at which signal 15,000 Druses speedily muster. They have no bayonets, are strangers to tactics or discipline, and are merely a crowd of peasants with short coats and naked legs; brave almost to excess, and entertaining a proverbial contempt of death. They never encounter an enemy face to face in the open plain. They are a sort of rude chasseurs, firing behind rocks and bushes with such accuracy as seldom to miss their aim. Thus, when met on their mountain ground, they are nearly invincible. In regard to religion, although by no means wholly devoid of it, as their enemies allege, they show a singular absence of that ostentatious and sectarian zeal which pervades the Oriental world. They pray indiscriminately in a church or in a mosque, and appear to view Christianity with less aversion than Mahometanism. Any strict outward observance is chiefly confined to an initiated class, called okkals, or doctors, who consider themselves as alone holy and learned among an ignorant people. Europeans, after long and vain attempts, have at length obtained a sight of their sacred books, but without being much the wiser. Amid an obscure mystical jargon, it only appears that Hakim is still regarded with the same boundless veneration, and that his pretensions to a divine origin are fully admitted. In practice they adhere to his rejection of circumcision, fasting, and all the characteristic Moslem observances; they even admit his permission of incestuous connexion, to the extent of marriage between brother and sister. They have the virtues and the vices of barbarous life; the same boundless hospitality, the same deadly feuds, as among the Arabs. A general levy of the nation produces 40,000 fighting men, from which we may probably estimate the entire population at 200,000; a number which, on this small and poor district, denotes a superior density of population to that of the plains beneath, and fully illustrates the beneficial effects of liberty, even in this rude form.

Heresy in Lebanon has given birth to other national distinctions. In a part of its most elevated interior, towards the south, dwell the Motoualis, a race of the most bigoted Mahometans, but who adopt the sect of Ali, which prevails also throughout Persia. They are therefore designated by the Turks as *shiites*, or heretics, while they call themselves by a name which expresses the fullest confidence in its truth. This deadly schism, which has caused so much blood to flow in the Moslem world, has rendered the Motoualis hated by all their neighbours, Christian and Mahometan. They will not even drink out of a vessel which has been used by either of these sects, till it has undergone a purification. At holy seasons they are said to study to wash away their sins by shedding the blood of a heretic. They fight with such intrepidity, and even desperation, that, though not mustering above 7000 fighting men, they have remained always unconquered, and this handful has put to flight armies of many thousands. The Ansarians dwell along a range of northern heights towards Antioch. They live in a sort of anarchy both as to religion and government; but they are very little known. It would be improper to conclude without mentioning the Latins or Franks, who are almost all monks, and act the part of *ciceroni* to strangers in the Holy Land; but, as their character is essentially European, and only modified by local circumstances, their peculiarities will be better distinguished when we come to treat of Jerusalem and its vicinity.

The mountains of the eastern frontier of Turkey produce races exhibiting decided peculiarities. The great and ancient kingdom of Armenia, situated in a mountainous corner of Western Asia, has remained comparatively little affected by that mighty train of revolution which has swept over that region. Here, too, religious schism has given its stamp to the character of the natives. In the famous controversy of the two natures, the Armenians followed the dogma of Eutyches, who admitted in the Saviour only one, compounded of divine and human. The character of the Armenians, however, has been formed, not so much by a dogma transcending human comprehension, as by habits of religious quietude and political exclusion. Their course of life much resembles that of the Jews, with whom they are often found in conjunction. But what in the latter is sordid and grasping parsimony, appears scarcely in the Armenian to exceed the limits of steady and meritorious industry. This people, in fact, carry on all the trade, and many of the manufactures, of Persia and Turkey. Ispahan, in the days of its greatness, had Julfa, a large suburb, expressly appropriated to the Armenians. They have penetrated into India, central Asia, Africa, and the east of Europe; and have been sometimes, though not often, seen in France and England. In general they lead a peaceable and orderly life, under the government of heads of families. The court of Rome, by indefatigable efforts at conversion, has succeeded in effecting a species of schism, by drawing over to her communion 20,000 out of the 170,000 families of whom the nation consists. The great remaining majority adhere to the Eutychean creed, and revere, as their head, the patriarch of Erzeroum. They admit the marriage of priests, and are free from other

Catholic regulations; but in return they carry fasting and ablution to a pitch unknown to any other Christian sect.

The Koords, or Kurds, inhabit a long and rugged chain stretching south-east from the mountains of Armenia, parallel to the Tigris, along the frontier of the Turkish and Persian empires. They are the same people known under the ancient name of Carduchi, through whom Xenophon fought his way, when conducting the famous retreat of the Ten Thousand. They have still the same name, and are the same people; the boldest and rudest in all Asia. Those pastoral pursuits which, on the high table plains of Tartary and Persia, vary and soften the habits of war and plunder, are impracticable in a region which presents nothing but rugged steeps, frightful ravines, and narrow valleys. Here every chief is seated in his castle, where he meditates, and whence he attempts, the plunder of the rich plains which lie beneath him. The Koords have, however, the characteristic virtue of barbarians, a frank hospitality, and also a pride of pedigree, founded on a national existence which may be traced to a high antiquity.

Sect. VII.—*Local Geography.*

The deep interests which attach to this region of Asia depend little on the divisions established by the Turkish government. It calls them pachalics, from each being governed by one of its modern satraps. This circumstance often very seriously affects, for a time, the destiny of the people; but it does not, to European eyes, form any permanent or distinctive features. We know these territories, not under the name of the pachalics of Acre, of Tripoli, of Istchil; but under others, which refer to the memory of their departed glories, and to what they were when they presented to the eyes of mankind the Holy Land, Troy, Tyre, Syria, and Babylon. We seek on these shores exclusively the monuments and traces of the period when they bore these immortal names; and we gaze on the modern inhabitants and their abodes, chiefly in wonder at the sad and surprising contrast which they exhibit.

In surveying, on this principle, the Turkish Asiatic empire, we shall divide it into four parts:—Palestine, or the Holy Land; Syria;* Asia Minor; provinces on the Euphrates.

Subsect. 1.—*Palestine.*

Palestine, a name supposed to be derived from the ancient Philistine coast, has been applied, from the earliest of modern ages, to the territory anciently assigned as the portion of the twelve tribes. The dimensions of this country do not correspond to its fame: it may be 150 miles in length north and south, and nearly as much in extreme breadth. It is bounded on the west by the Mediterranean; on the north it ranges along the southern skirts of Libanus; while, on the east and south, it passes into the Arabian desert, amid long ranges of rocky hills. Judea is a high country, rising by successive terraces from a shore that is, in many places, bold and lofty. Its principal eminences, Carmel, Bashan, Tabor, do not ascend into bleak and rugged heights: they are covered with villages, rich pastures, and luxuriant woods; on their slopes are copious vineyards, and in the clefts of the rocks numerous bees, feeding on their aromatic plants, deposit their honey. Traces are even found of a cultivation, by artificial terraces, equal to that which prevails in the most improved parts of the East. There has been here, however, a busier work of rapine and oppression than even in any other part of this suffering empire. Acre, under the sway of Daher, of Omar, and of Djezzar, scarcely paid even a nominal submission to the mandates of the Porte. The former was endowed with some great qualities; but Djezzar, ferocious and ignorant, having raised himself to power only by headlong determination and uncompromising cruelty, converted all the countries over which he tyrannised into little better than deserts. A line, however, drawn from north to south through Judea, attaches a large part of it to the pachalic of Damascus, which has long been, perhaps, the very best governed part of the Turkish empire. Within these limits, reaching from the sea of Galilee through Naplous, to the vicinity of Jerusalem, the region displays much of its ancient fertility. The declivities of the mountains are even formed into terraces, that they may retain the moisture, and be fit for bearing ample crops. This part of Palestine, however, and still more the other, is cruelly infested by bands of Arabs, who not only carry on habitual incursions, but have regularly established themselves on the line of the principal high roads, where they cause every traveller deeply to rue his temerity if he proceed without the security of a strong armed body, or without having propitiated by liberal gifts the favour of some great thief of the desert. In such a vicinity, the husbandman, of course, reaps his harvest in little or no security; and Judea, on the whole, groans under the double evil of being at once ill governed, and not governed, or at least defended, at all.

Entering Judea from the south, after passing the confines of the desert, we come first to Gaza, called by the Arabs Razza (with a strong guttural sound on the *r*). This celebrated capital of the Philistines still derives some importance from its situation, which renders it a connecting point between Palestine, Syria, and Arabia. The surrounding country, a wide

* [Palestine and Syria with Adana have been ceded to the Pacha of Egypt.—Am Ed.]

flat expanse, covered with date trees, is more than half Arabian; but the immediate vicinage consists of a black and fertile soil, the produce of whose gardens is valued even at Constantinople. Gaza has about 500 looms, which manufacture coarse cottons for the neighbouring Arabs. They collect from them the strong alkaline plants which grow in the saline and sandy soil, and from which a soap of superior quality is manufactured. Its main dependence, however, is upon the caravans to Sinai, Egypt, and Mecca, which, entering here upon a long route where no provision can be found, must lay in at Gaza a large stock of every necessary. Occasionally there occur good opportunities of making large profits, when the Arabs bring to Gaza the proceeds of such of the great caravans as they have succeeded in plundering. These rude bandits then often present the most precious commodities of the East, without being able to form the least idea of their nature or value. Volney mentions one who had procured a collection of the finest pearls, which, viewing them as a vegetable substance, he endeavoured to boil; but finding no appearance of their becoming fit for food, he gladly disposed of them for a trifle.

Coasting to the north, along a rocky coral shore, where navigation is attended with some danger, we come to Joppa, now called Jaffa, so conspicuous as the port of Judea, and the only point of communication which David and Solomon had with the Mediterranean. At present, the port is one of the worst on that sea, being so encumbered with rocks and shoals that vessels can anchor only at the distance of a mile from the shore. There is, however, an ancient harbour, now choked up, but which might be made to contain ships of 300 tons. Great antiquity is ascribed to Joppa even by the heathen writers. In the middle ages it rose into fame, from being chosen, as the nearest point to Jerusalem, for the landing-place of the great crusade under Richard Cœur de Lion and Philip of France. Jaffa continued the head-quarters of the Christians in that celebrated campaign; and to the south extends the wide field of Ascalon, where the arms of the Crescent sustained so signal an overthrow. In the history of the present day, Jaffa has obtained a dismal celebrity from its capture by Bonaparte, and the subsequent massacre of the prisoners made there. Jaffa is now a collection of poor huts built round the amphitheatre of a hill, with no military strength, though, from its situation, and two fine springs within its walls, it might be converted into a very strong fortress. At Jaffa is a convent of the monks of the Holy Land, a plain wooden building close to the sea, where Christian travellers and pilgrims meet a hospitable reception; but the fathers themselves live under continual apprehension for the safety of their property, and even their lives, from the bigoted enmity of the savage race to whose absolute sway they are subjected.

As soon as the pilgrim has secured a convoy, he hastens towards the mountainous region before him, in the centre of which is Jerusalem, the main object of his expedition. He sees the vicinity stripped by the passage of hostile armies, at various periods, of the trees which once adorned it; but there are still a number of well-watered gardens, enabling Jaffa to make a considerable export of fruits, among which the water-melons appeared to Clarke the finest he had ever seen. The Vale of Sharon, which next presents itself, is still remarkable for its rose, celebrated in Hebrew poetry. After passing a number of villages, mostly in ruins, at the foot of the dark hills which ascend towards the rugged centre of Judea, we enter Rama or Ramla, the ancient Arimathea. No part of the Holy Land is more fertile

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References to the Map of Palestine.

NORTH PART.
1. Rumcile
2. Saide
3. Kozie
4. Rama
5. Sarfand
6. Cana
7. Arnoun
8. Taybe
9. Panias
10. Asor
11. Yazoun
12. Gaba
13. Tiron
14. Shimmah
15. Soor
16. Scanderoun
17. Nakhora
18. Zib
19. Sogan
20. Abel
21. Nouzan
22. Conseira
23. Ras el Ma
24. Kanneytra
25. Nowaran
26. Julias
27. Tel Houm
28. Jacob's Bridge
29. Akaby
30. Joseph's Well
31. Kadnas
32. Azochis
33. Jotapata
34. Belus
35. Musshoor
36. Acre
37. Satyra
38. Shufhammer
39. Nassara
40. Cana
41. Turan
42. Hettin
43. Tabaria
44. El Hosn
45. Feik
46. Juras
47. Tzeil
48. Nowa
49. Kasem
50. Shemskein
51. Tefas
52. Draa
53. Mezareib
54. Torra
55. Kakham
56. Remtha
57. Abil
58. Capitolis
59. Zamma
60. Om Keis
61. Szammera
62. Szammagh
63. Summuk
64. Nain
65. Makheably
66. Zargheen
67. Ghierbee
68. Arbay
69. Elteery
70. Pellegrino
71. Terfoon
72. Sortoura
73. Kasarie
74. Caphar Arab
75. Bicerhen
76. Sanhoor
77. Jeneen
78. Zezin
79. Beisan
80. Golan
81. Pella
82. El Hosn
83. Beit el Ras
84. Hebrns
85. Tel Dehama
86. Kafkafa
87. Djerash
88. Souf
89. Djezza
90. Kalaat Rabood
91. Amata
92. Mezar Abou Obeid
93. Azer
94. Jubbaugh
95. Beit Emireen
96. Sabusta
97. Salee
98. Sanour
99. Zeta
100. Min Tabas Aboora
101. El Mukhali
102. Moosa.

SOUTH PART.
1. Arsoof
2. Heram
3. Oudjaa
4. Bait Saka
5. Howee
6. Sawee
7. Naplous
8. Jacob's Well
9. Alexandrium
10. El Meysarn
11. Herath
12. Szalt
13. Feheis
14. Szafout
15. Yadjoush
16. Kaalat Zerka
17. Amman
18. Tabouk
19. Szyr
20. Naour
21. Livias
22. Oseran
23. Lebonah
24. Bethel
25. Selwed
26. Rama
27. Latroun
28. Loudd
29. Kobad
30. Ramla
31. Jaffa
32. Yebne
33. Tookrair
34. El Ter
35. Saariz
36. Caliloune
37. Kariet el Aneb
38. Jerusalem
39. Bethany
40. Jericho
41. Ribhah
42. Convent of St. John
43. Macherus
44. Heshbon
45. El Aal
46. Madeba
47. Baal Meon
48. Lob
49. Chanbak
50. Herodium
51. Kedron
52. Santa Saba
53. Bethlehem
54. Sech
55. Shdood
56. Hamumi
57. Misdal
58. Askalaam
59. Dio
60. Beersenait
61. Bedirza
62. Bel Hanoon
63. Agla
64. Libna
65. Eglon
66. El Khalil
67. Khan
68. Tekoa
69. Ziph
70. Carmelia
71. Adara
72. Djimba
73. Malatha
74. Arad
75. Thella
76. Getlan
77. Belequis
78. Estemo
79. Dair
80. Khanyounes
81. Gaza.

Rivers.
a Leitani
b Jordan
c Zerka
d Mandhour
e Rokad
f El-abe
g Cison
h Kasab
i Arsoof
j Petras
k Roubin
l Sorec
m Gaza
n Kedron
o Farah
p Szyr
q Zerka Mayn
r Wale.

35
36
37
34
33
32
31
MEDITERRANEAN SEA
Lebanon Mts.
Anti Lebanon Mts
Litani R.
Damascus
Barrage
Saide
R El Berde
Mt Hermon
El Awaaj R.
R Lowa
Soor
C Blanco
L El Houle
Acre
Bay of Acre
Pt Carmell
Nazara
Feik
EL LEDJA
Ezra
Amaara
Mt Tabor
Om Keis
Kanoat
Dibel Hauran
Kissarie
Mt Gilead
Asera
R El Ikeiy
Oerman
Beisan
R Zerka
Jaffa
Salt
Ammon
Jericho
JERUSALEM
Dibel Attarus
R. Mojib
Gaza
El Hhalil
DEAD SEA
Kerak
El Ghor
Akaba R.
5 10 20 30 40
English Miles

than the plain round Rama, which resembles a perpetual garden. The Christian army found it a fenced city; strong, populous, and abounding with all the luxuries of the East. It is now only a collection of plaster huts, interspersed with olives, figs, and *nopals*, and overshadowed by fine palm trees. Three miles to the north of Ramla is Lydda, now Loudd, a place of some fame in scripture history, but much decayed, though a weekly market is held for the cotton spun by the neighbouring peasantry.

From Ramla we ascend at once to the hill country of Judea, a dreary and gloomy region, the aspect of which appeared fully to explain to Chateaubriand why Jephtha's daughter and the prophets of sorrow repaired thither to pour forth their lamentations. To Dr. Clarke they appeared to resemble the rudest parts of the Apennines; the sides of the mountains consisting chiefly of naked limestone precipices towering like walls, and the strata of which resembled the seats of an amphitheatre. From their crevices grow dwarf oak, box, and rose-laurel; and considerable woods of olive trees in some places extend along their sides. Bands of Arabs have everywhere formed fixed stations in these rocky fastnesses, and render this the most dangerous part of the journey through the Holy Land. Between these hills, however, occur well-watered valleys, which produce plentiful crops both of grain and fruit. Some fine villages are embosomed in their recesses. At St. Jeremiah (named in memory of the prophet), Chateaubriand saw goats with pendent ears, sheep with large tails, and asses that, by their beauty, reminded him of the onagra of Scripture. In what is called the Terebinthine Vale may still be traced the scene of the great combat between Israel and the Philistines; the brook in which David collected the stones, with one of which he laid in the dust the gigantic boaster who had struck terror into the Jewish army.

After passing through about thirty miles of such territory, the exclamation is made *El Kods!* (the holy city!) and the traveller sees Jerusalem (*fig.* 550.). Its aspect seems to

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Jerusalem.

have struck travellers variously. Chateaubriand describes it as a line of Gothic walls flanked by square towers, with the tops of a few buildings peeping above them. Dr. Clarke, on the contrary, who approached, indeed, from the north, says:—"Instead of a wretched and ruined town, described by some as the desolated remnant of Jerusalem, we beheld, as it were, a flourishing and stately metropolis; presenting a magnificent assemblage of domes, towers, palaces, churches, and monasteries, all of which, glittering in the sun's rays, shine with inconceivable splendour." It is probable that the difference of the aspect, and of the objects presented at the opposite sides of the city, may account for pictures so much at variance.

Jerusalem, in its greatest extent, stood upon four hills, some of which might almost be termed mountains, were it not for the loftier elevations with which it was encircled. Mount Sion was the upper or principal quarter,—the Mount of God, the city of David,—on which were situated the finest edifices and strongest fortifications. To the east was Mount Acra, to the east and west Moriah, and to the north Bezetha. From the last, a broad and fine valley stretched towards the ancient Samaria. On the other side the deep valleys of Jehoshaphat, Hinnom, and Siloe penetrated to the awful rocks which stretch towards the Dead Sea. These valleys are still watered by the brook Kedron and the pool of Siloam; and the rocky sides of the hills immediately bordering on them have been excavated into tombs; but they have never been built upon, and the inhabited part of the city has been always upon the summits and along the sides of the hills. The walls were formerly four miles in circuit, but this is now reduced to two and a half; and a part of what is commonly supposed to be Mount Sion is now covered with ruins. Of the remaining circuit, a great part presents little more than the remains of a city. The gloomy desolation which pervades it is described by Chateaubriand as extreme. "The houses are heavy square masses, very low, without chimneys or windows. They have flat terraces or domes on the top, and look like prisons or sepulchres. The whole would appear to the eye one uninterrupted level, did not the steeples of the churches, the minarets of the mosques, and the clumps of nopals, break the uniformity of

"nter the city, you will there find nothing to compensate for the dullness of its
lose yourself among narrow unpaved streets, here going up-hill, then down,

from the inequality of the ground, and you walk among clouds of dust or loose stones. Canvas stretched from house to house increases the gloom of this labyrinth; bazaars roofed over, and fraught with infection, completely exclude the light from the desolate city. A few paltry shops expose nothing but wretchedness to view, and even these are frequently shut, from apprehension of the passage of a cadi. Not a creature is to be seen in the streets, not a creature at the gates, except now and then a peasant gliding through the gloom, concealing under his garments the fruits of his labour, lest he should be robbed of his hard earnings by the rapacious soldier. The only noise heard from time to time in this deicide city is the galloping of the steed of the desert; it is the janissary who brings the head of the Bedouin, or returns from plundering the unhappy fellah."

Two splendid objects shine conspicuous amid this gloomy picture, which is probably, however, a good deal overcharged, and place Jerusalem on a level with whatever is most splendid in the East. These are, the Church of the Sepulchre (*fig.* 551.), and the mosque of Omar. The former has long been the grand object of pilgrimage and visitation to the Christian world. It was erected by the empress Helena, the mother of Constantine, upon a site which was supposed to include the scene of all the great mysteries of our religion,—the crucifixion, the entombment, the resurrection. It consists properly of three churches or chapels, connected together by walls and covered passages. The first and most extensive is termed the Church of the Holy Sepulchre. The rock, however, in which the tomb was excavated is allowed to have been almost entirely cut away, and that part which contains the sepulchre now rises above the ground in the form of a grotto covered with slabs of beautiful *verde antico*, rendered rough by the numberless fragments furtively broken off by crowds of devout pilgrims in search of holy relics. Close to the entrance is a block of white marble shown as the stone on which the angel sat, and in the interior lamps are continually burning. The two other churches consist of large apartments, one above, the other below. The lowest is called the Church of the Three Crosses, which were supposed to have been there miraculously discovered: it contains also the tombs of Godfrey and Baldwin, the Latin kings of Jerusalem; and a rent is shown in the natural rock, supposed to be that produced by the earthquake at the crucifixion. The upper church is called that of Mount Calvary, where the rock again appears with the same rent, and with holes supposed to indicate the place of the Three Crosses.

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Church of the Holy Sepulchre.

Small apartments along the sides of the walls of these churches, both within and without, are occupied by monks belonging to the different nations of the East and West; Latins, Greeks, Abyssinians, Copts, Armenians, Maronites, &c. According to Maundrell, the possession of these sacred places was often furiously contested. From abuse and vituperation, the combatants proceeded to wounds and blows; and the sacred floor was not unfrequently stained with their blood. The guide showed to the above-mentioned traveller, scars, which he had himself received in these unholy contests. In 1690, however, the French king is said to have secured for the Latins the exclusive command of these sacred places, the occupation of which is now distributed by them at will among the other sects. The monks are continually engaged either in keeping 200 lamps constantly burning, in preserving every spot in these churches strictly clean, or in celebrating the mysteries of their worship. "From the arches above, where they nestle like pigeons, from the chapels below, and subterraneous vaults, their songs are heard at all hours both of the day and night. The organ of the Latin monks, the cymbals of the Abyssinian, the voice of the Greek caloyer, the prayer of the solitary Armenian, the plaintive accents of the Coptic friar, alternately or all at once assail your ears; you know not whence these concerts proceed; you inhale the perfume of incense without perceiving the hand that burns it; you merely perceive the pontiff who is going to celebrate the most awful of mysteries on the very spot where they were accomplished."

It is remarkable that, after the precincts of this temple have been so long venerated as containing the scene of all the mysteries of the Passion, a late great traveller has openly disputed, and even derided, the whole of the locality. Dr. Clarke insists that there is no hill such as could be Mount Calvary, and no space on which the crucifixion could take place; that the alleged sepulchre is not cut out in the rock, but is composed of a number of detached pieces of stone cemented together; that the stone does not fit it: in short, that it ought to be without the city, and by no means in its present position. He finds a much more probable site among a number of tombs which he discovered in the Valley of Hinnom, and some of which are spacious and handsome. We have not time or means to enquire what

room there may be for this scepticism, and whether it is worth while to disturb a belief to which religious feeling has attached itself during so many ages. In general, we may observe, that the sepulchral monuments of Jerusalem, particularly the tombs of the kings, of the Virgin, and of the patriarchs, display no common share of labour and beauty. They are usually spacious chambers cut out of the solid rock, and elegantly ornamented with carving and sculpture.

By much the most splendid edifice in Jerusalem, however, consists of the mosque erected by Omar on the site of the Temple of Solomon. It is an octagon surmounted by a lantern of the same shape, and is considered superior to any other structure in the Turkish empire, not excepting the mosque of St. Sophia at Constantinople: it yields only to the matchless boast of Saracenic art, the Alhambra. The walls are externally lined with painted tiles covered with arabesques, and with verses from the Koran in letters of gold. Its numerous arcades, its capacious dome, with the rich costume of Eastern devotees passing and repassing, render it, even from without, one of the grandest sights which the Mahometan world has to boast. The interior is in general rigorously shut against Christians; but Dr. Richardson contrived to effect an entrance. He found it a magnificent square 1489 by 995 feet, the floors and walls of marble, and the *sakhara*, or inner shrine, 60 feet square, of the finest materials, and covered with sentences from the Koran.

The manufactures of Jerusalem consist chiefly of objects accounted sacred, and sold much above their real value. Among these are shells of mother-of-pearl, held as badges of pilgrimage, crosses, and beads made either of the stones of dates, of a species of hard wood, or of the black fetid limestone of the lake Asphaltites. These holy toys are largely purchased even by those who do not hold them in much account, but who know that they will form the most acceptable of all presents to the Greeks, and even to the Catholics. The Latin monks receive, lodge, and guide the pilgrims for a month, leaving it entirely optional with their guests, whether they shall bestow a gratuity at parting. This, however, is usually done to the utmost of their ability; by which, with the remittances from Europe, Volney conceives that vast treasures must have been accumulated. Against this inference Chateaubriand urges, that the Latin pilgrims may be considered as nearly extinct, since not above 200 had been numbered in the course of a century; that the Oriental pilgrims do not exceed fifteen or twenty, often poor, and their purses drained by the exactions of the Turks and Arabs; that the monks themselves have often large sums extorted from them by the *avanies* or arbitrary demands of the government: in short, he does not think they can do more than support their establishment.

The highest and most desolate tracts of Judea occur south-east from Jerusalem, and lead to Lake Asphaltites. The cultivated and smiling valleys of its lower stage, appear no longer. The surface is broken only by deep and dreary glens, hemmed in by precipices so lofty as to exclude the sun; the chalky summits of the rocks, rent as by a convulsion, shoot into a thousand fantastic shapes. Their sides are perforated by deep caves, which served as a retreat to the saints and prophets of the Old Testament, and to the Christians of the middle ages. Every spot here recalls some of the great events of sacred history. "Extraordinary appearances everywhere proclaim a land teeming with miracles: the burning sun, the towering eagle, the barren fig-tree; all the poetry, all the pictures of scripture, are here. Every name commemorates a mystery; every grot proclaims the future; every hill re-echoes the accents of a prophet. God himself has spoken in these regions: dried up rivers, riven rocks, half-open sepulchres attest the prodigy: the desert still appears mute with terror, and you would imagine it had never presumed to interrupt the silence, since it had heard the awful voice of the Eternal." (*Chateaubriand.*)

The monastery of St. Saba, rising perpendicularly from the ravine of the brook Kedron, appears in the heart of this desolate region. Once the refuge of the saints of the wilderness, it is now a scene of quiet monastic seclusion. In continual danger from the surrounding tribes of Arabs, it has less the aspect of a convent than of a fortress, the abode of some bold and ruthless crusader. Its immensely strong and lofty towers, frowning over hill and glen, are seen from a great distance, and one of the fathers, by turns, walks his nightly round on the top of the towers. Yet the Arabs, though continually hovering about in a menacing attitude, usually content themselves with levying a tithe of fine white bread, baked in the convent, and allow the convoys to pass unmolested. Somewhat to the south is Hebron, so venerable by its antiquity, and still a considerable Arab village. The court of Constantinople supports here a temple, built over the supposed sepulchres of the patriarchs, which are covered with magnificent carpets of green silk, embroidered with gold.

These awful heights terminate in an object still more awful, *the expanse of the Dead Sea.* This lake, whose waves engulfed the guilty cities of the plain, presents, perhaps, the most dreary and dismal scene to be found in the circuit of the globe. The rocks by which it is enclosed present quite a different aspect on the eastern and on the western shores. On the former, which is that of Arabia or of Moab, a prodigious black perpendicular wall, in which there is not a summit or the smallest peak, and in which the least bird of heaven could not find a blade of grass, throws its perpendicular shadow over the waters. On the

western or Judæan side the limestone and sandy cliffs tower in varied and fantastic forms, suggesting often the ideas of piles of armour, waving standards, and rows of tents. The gloomy sea which these rocks encircle has been clothed by fancy with awful and supernatural characters. A pestilential vapour, it has been said, rises continually from its waters; fish cannot live in, nor birds fly over them; iron will not sink in them; nor have they ever been navigated by ship or bark. Recent travellers, however, in the hasty glances which they have caught of this extraordinary scene, have dispelled all that is marvellous in these descriptions, though they have at the same time shown that there was some foundation for them. The water contains forty-one parts in the hundred of salt; a much greater proportion than that of the sea, and derived from entire rocks of this mineral, continually dissolving on its southern shore. It is impregnated also with other mineral substances, particularly bitumen, which often rises from the bottom, and floats in large quantities on the surface. Thus it acquires a much greater weight than any other water, and is able to support bodies that would sink elsewhere. A fetid and perhaps pestilential air often exhales from water impregnated with sulphur, bitumen, and similar substances. Late travellers may have found a few shell-fish on the shore, or seen a few birds on the wing over the waves; but these form only exceptions to the general absence of animal life. That boats and vessels are never seen on it, can only be owing to the want of any motive for its navigation. Every thing around, in short, bears that dead, dreary, and fearful character that ought to mark a country struck by the malediction of Heaven.

The shores of the Dead Sea, and the valley to the north of it, consist of an expanse of salt, dry mud, and moving sand. In proceeding through the plain, Chateaubriand discovered what at first appeared to be sand in motion. On drawing nearer, he beheld a yellow current, scarcely to be distinguished from the sands on its shores. It was deeply sunk below its banks, slowly creeping towards the pestilential lake by which it is engulfed. This was the Jordan. In its higher course, however, as it descends from the Lake of Tiberias, it is bordered by trees and shrubs, and its banks are often picturesque; and in spring, when "the swellings of Jordan" take place, the river fills its deep banks, and flows with rapidity. Its vicinity is dreadfully infested by Arabs; notwithstanding which, the visitants of Jerusalem make crowded pilgrimages, for the sake of bathing in its sacred waters.

Between the Jordan and Jerusalem is the wide, flat plain of Jericho, twenty miles in length and ten in breadth, walled in on all sides by the high mountains of Judea and Arabia. It is, for this reason, very hot, and in many places parched; but the skill of the ancients conducted through it, with such skill, all the waters on its circuit, as to render it the most luxuriant spot in Judea. Even in its present neglected state, it yields good crops of wheat and barley; also the balm, for which this country has always been famous, though not equally with Arabia; the palm, and the *zaccon*, seemingly the *myrobalanum* of the ancients, which yields an oil superior to that of the olive. In this plain, the city of Jericho, famous through so many ages, is recognised, with some doubt, in the village of Ribha, a collection of about fifty Bedouin tents, that present no vestige of a city. Mr. Buckingham, however, noticed some ruins, at the distance of three or four miles, that appear to mark more precisely the real site of Jericho.

Before quitting Jerusalem, it may be advisable to make an excursion south-east to *Bethlehem*, which ranks high among the sacred places. Bethlehem is still a considerable village, containing, according to Volney, six hundred men capable of bearing arms. It is chiefly visited for the sake of the convent built by Helena over the manger of the nativity (*fig.* 552,). The identity of the spot, seeing it is admitted even by Dr. Clarke, we shall not dispute; but the taste which has paved this humble scene with white marble, supported it with Corinthian columns, and hung it with blue satin embroidered with silver, may well be questioned.

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Church at Bethlehem.

From Jerusalem, the road northwards to Samaria is through a rugged and stony country, which the industry of the people has, however, so formed into terraces, and so covered with vine and fig trees, and even with millet, cotton, and tobacco, that Dr. Clarke ranks it in many parts as the Eden of the East. Its flourishing state is the result of the beneficent influence of a better government, that of the Pacha of Damascus, within whose domain it was included. Here the traveller passes Bethel, the scene of Jacob's dream, and a fine valley called Kane Leban, the Lebonah of Scripture. After a march of sixteen hours, he reaches Naplous, or Napolose, near the site of the ancient Samaria. This city is one of the most beautiful and flourishing of the Holy Land. It stands in a bold and fertile valley, surrounded by hills, and embosomed in stately groves and rich gardens. The inhabitants, about 10,000, are employed in manufacturing for the extensive

country around: soap is the chief staple. Here may be seen, seemingly well authenticated, the tombs of Joseph and Eleazer, and of Joshua, cut in the living rock. A small remnant is found of the ancient Samaritans, adhering to their worship upon Mount Gerizim, to their sacrifice of the ram, and to their peculiar version of the Pentateuch.

Before proceeding onward to the fine regions of Galilee, it will be necessary to descend towards the coast, and notice some prominent features which it presents. Almost in a line with Napolose occurred Cæsarea, the magnificent capital of Herod, long the seat of Roman government, and where Paul made his eloquent appeals to Felix and Agrippa. During its glory, no city of Palestine, scarcely any of Syria, could vie with Cæsarea. Its marble palaces, theatres, and temples, looking towards the sea, struck with astonishment the passing navigator. Its temple rivalled that of Jerusalem; and its games, celebrated every five years, attracted a concourse of all the nations of the East. Plundered by Baldwin in 1101, and subjected to various turns of war and fortune, it was gradually deserted; and its materials have been employed in the ornament of modern capitals. Only a few remnants of marble walls and some porphyry columns remain scattered over its site.

Quitting the ruins of Cæsarea, we approach the heights of Carmel, which, after running for a considerable space north-west, terminate in a rocky promontory about 2000 feet high, projecting into the sea. It contains a considerable number of grottoes, once occupied as cells and chapels by the austere order bearing the appellation of Carmelites. A very few still remain, who lead a recluse life, and are venerated even by the Mahometans, who supply their wants. The mountain bears the traces of ancient aqueducts, and of plantations of vines and olives; and on the top are the ruins of a considerable monastery erected by Helena.

On the opposite side of the bay, partly enclosed by Mount Carmel, is Acre, which now ranks first in political importance of any town in this neighbourhood. Though often considered as Syrian, its position within the domain of the ten tribes, and its modern relations, appear to attach it to Palestine. During the crusades, it exchanged its ancient obscure name of Acron for that of Ptolemais, celebrated as a scene of siege and contest, and for the repeated change of masters which it had to endure. These vicissitudes reduced it almost to a desolate state, till, in the seventeenth century, the celebrated emir Facardin began to rebuild it. In later times it became the capital both of Daher Omar and of Djezzar Pacha; and this last tyrant, while he desolated the rest of his dominions, made it his pride to restore and embellish Acre. It became still more famous when the Turks, fighting behind a mere garden wall, but guided and seconded by Sir Sidney Smith and a few British seamen, set bounds to the hitherto irresistible career of Napoleon, and forced him to retreat to Egypt. Acre is now a considerable place, though its streets, like those of most Eastern towns, are narrow and dirty; yet Djezzar, by collecting all the remains of Cæsarea and other surrounding ruined cities, erected the most elegant mosque and the finest baths that exist in Syria. More useful works are those of a bazaar and of a fine fountain for the supply of water, which was much wanted. He was even induced, by motives the urgent policy of which was obvious, to extend to commerce some measure of that protection which was elsewhere withheld: still, even here it was severely cramped by the blind cupidity with which he imposed duties and monopolies. There is, however, a considerable export of corn and cotton, the produce of the flat and fertile plain by which Acre is surrounded. The port, though it has lost much of its former importance, in consequence of being partially choked up with sand, has been in a good measure restored, and is the best on any part of this coast.

The route from Acre into the interior is across the delightful plain of Zabulon, which Dr. Clarke compares to the finest parts of the Crimea or of Kent. On the other side is Sephoury, anciently one of the principal towns of Palestine, and augmented by the Romans under the appellation of Diocæsarea. A great part of its church, one of the stateliest edifices in the Holy Land, still remains: it is adorned with some very curious ancient paintings. The place itself is reduced to a miserable village.

Between Sephoury and Nazareth a hilly and stony tract intervenes. This last spot, distinguished by the early residence of the Saviour, was raised to considerable importance during the crusades, and, after falling into almost total decline, was rebuilt by Facardin, and enlarged by Daher Omar. It now contains 2000 or 3000 inhabitants, who were reduced to great poverty under Djezzar; but, since his death, have enjoyed some tranquillity. The convent is large, resembling a fortress, and almost forming a little town by itself. It contains fourteen inmates, usually with a good many visitants. Nazareth ranks second to Jerusalem among the holy places, and the scenes of all the events in the life of Joseph and of the Virgin are carefully pointed out. The church, composed of three naves, is very handsome, adorned with magnificent staircases, and two beautiful columns of oriental granite. The most venerated spot is the Grotto of the Annunciation, the descent to which is by a flight of marble steps. The natives believe that, when sick of the plague, they may, by rubbing themselves against the columns, assuredly obtain restoration of health. Hence its approaches are continually crowded by the sufferers under this distemper; a circumstance which renders it very unsafe for other visitants.

East from Nazareth is Mount Tabor (*fig.* 553.), a grand natural feature, rendered doubly celebrated by the transfiguration, of which it has, perhaps erroneously, been supposed the theatre. It is a very fine hill, about four miles in circumference, but rising so gradually that it may be ascended on horseback. On the top is a circular plain, about a furlong in length, which appears to have been at one time surrounded by a wall, when it formed a strong fortification; and traces of this wall are reported to have been discovered by some modern travellers. From the summit the view is truly magnificent, extending over the richest and most picturesque tracts of Judea; the plains, the hills, and the sea of Galilee; the mount of Gilboa to the south, a high narrow ridge, famous for the signal triumph of the Philistines; and to the west, towards Nazareth, the plain of Esdraelon, which has been described as a portion of the Holy Land gifted by nature beyond any other. Abandoned, however, to oppression and misrule, it is nowhere turned up by the plough; it forms one vast meadow of the richest pasture, sustaining only a few scattered herds, guarded by trembling shepherds. This plain was the scene of the defeat of Sisera by Barak; of that of Josiah by Pharaoh Necho, and of many great encampments formed by the crusaders or the defenders of Palestine. Near its northern extremity is the small neat village of Cana, celebrated for the miraculous conversion of water into wine. Both Dr. Clarke and Dr. Richardson here observed traces of the custom to which the scripture narrative alludes, of water being kept in large jars or pots made of the compact limestone of the district.

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Mount Tabor.

After passing Mount Tabor, and the range of which it forms the loftiest pinnacle, we enter the fine region of Galilee, a varied and fertile scene, extending along the western shore of the Lake of Tiberias. This large sheet of water, traversed by the Jordan in its early course, presents a different aspect from the dreary sea, begirt with naked rocks, in which that stream terminates. Enclosed by fertile valleys, and by verdant hills sometimes wooded to their summits, it presents, on a greater scale, the beauties of the finest lakes of England. It is seventeen or eighteen miles long, five or six broad; its waters clear and transparent, with the current of the Jordan visible through them. On its shores were once many prosperous and flourishing cities, of which few traces remain. The only one which retains any importance is Tiberias, a Roman city founded by Herod the tetrarch, in honour of the emperor whose name it bears. Herod made it a splendid city, where he received with festive pomp deputies from many of the Asiatic princes, and entertained them with naval games upon the lake. Tiberias afterwards became the seat of a rabbinical university, in which character its fame was so great, that, notwithstanding its recent and Roman origin, the Jews still account it one of their four holy cities; Saphet, Jerusalem, and Hebron being the other three. As it continues to be a received opinion, that unless suitable prayers were addressed twice a week in each of these cities, the world would return to chaos, a just ground is afforded to solicit the contributions of all the wealthy disciples of Moses to avert such a disaster. Tabaria thus retains a population of 4000, of whom a large proportion are Jews. The present city is modern and Turkish; and though its site and fortifications have externally a grand and imposing aspect, the interior is very poor, and a great part of it deserted. The old city, at a little distance south, is marked by many fragments of walls and columns, but without any definite feature, or any great building in an entire state. In this quarter are baths, which retain their ancient reputation. Being very hot, and strongly impregnated with mineral substances, they are found of great virtue in rheumatic and eruptive diseases. Remains of other great cities may be found along the western shore; but the precise positions of Capernaum, Chorazin, and Bethsaida, remain a subject of controversy.

In ascending to the high regions of the Upper Jordan, and turning somewhat to the westward, we find the town of Saffad or Saphet. It is not mentioned in Scripture, and occurs only in the apocryphal book of Tobit; nor is it till the time of the crusades that it begins to figure as a place of importance. Notwithstanding this comparatively late origin, the Jews, influenced by its being the seat of a famous university, and the burial-place of some of their most learned rabbins, attach to it a degree of sanctity sometimes exceeding that of Jerusalem itself. It has been supposed that, 150 years ago, it was inhabited by 12,000 Jews. It became also a principal seat of the power of Daher Omar, who founded there a Mahometan college. After his time it was much neglected, and Volney represents it as dwindled into an almost deserted hamlet. Burckhardt, however, found it containing 600 houses, built on several small hills, in a high and commanding situation.

Returning eastward to the banks of the Jordan, the general level of the country is found continually rising. The river here forms a flat marshy lake, some miles in circumference, called at present Lake Houle, anciently Julias, or Samachonitis. This upper plain of the Jordan is here shut in to the north by a lofty branch of Lebanon, called Jebel Sheik, or the Prince Mountain, which may be considered as forming the boundary between Palestine and Syria. Near its foot is situated Panias, which Herod, after embellishing and enlarging it, called Cæsarea-Philippi. It has now resumed its original name, and is sunk into a small village, though situated in a fine elevated country, fertile in grain, profusely embellished with plants and wild flowers, and abounding in game. Considerable architectural remains distinguish the vicinity, though it is still difficult to trace the magnificent temple erected by Herod in honour of Augustus. Round Panias, several rivulets, descending from the declivities of Jebel Sheik, unite, and form the Jordan. To the east of all these countries is a territory less closely attached to Palestine; that of the Hauran, called anciently the country beyond Jordan, which insensibly partakes of the character of the Arabian Desert, and becomes identified with it. For a considerable space, however, being traversed by Mount Gilead, it continues to be well watered, and contains a great extent of ground well fitted either for culture or pasturage. At present it suffers severely from the ravages of the Arabs; but under the Roman sway it appears to have been prosperous and flourishing. Djerash (the ancient Gerasa), Amman (Philadelphia), Bosra, and other towns, display on a great scale the remains of temples, theatres, baths, triumphal arches, and other structures which usually adorned a classic city. The remains of Gerasa have even been compared to those of Palmyra.

SUBSECT. 2.—*Syria.*

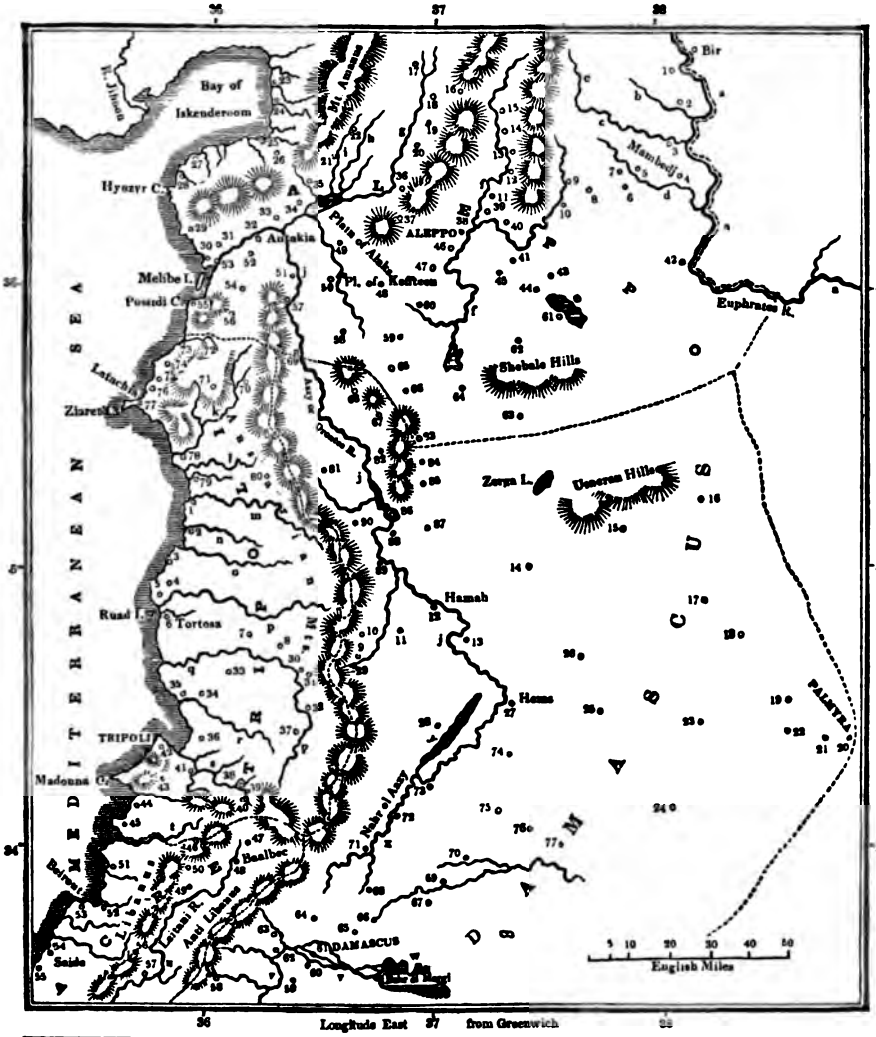
After passing the northern boundary of Palestine, we enter Syria, a great kingdom, equally famed in history, and presenting nearly a continuation of the same natural features: on one side the Mediterranean coast extending north and west; the high mountain chains parallel to it; the fine intervening valleys; and the great desert boundary on the east. Syria cannot boast an equal breadth of level territory; it may be considered in this respect almost a pyramid, of which Judea is the base. The mountains, however, are on a grander scale. Lebanon (*fig.* 554.) towers to a height unrivalled by any of the southern chains;

554

Heights of Lebanon.

its summit crowned with perpetual snows, its sides still presenting the remains of those majestic cedars with which they were anciently covered. The plains of Syria, though narrower, are richer, and have been more highly cultivated; and more striking contrasts have thus been produced between the extremes of civilized and savage existence. Her cities have always outshone those of the neighbouring countries; her capitals of Damascus and Antioch have been the most brilliant; her marts of commerce, Tyre, Sidon, Aleppo, the most flourishing and wealthy of any in the west of Asia.

Notwithstanding the strong natural barriers of Syria, she has always with difficulty maintained an independent political existence. The early kingdom of Damascus is best known to us by its wars with the kingdoms of Israel and Judah. Being more directly on the road from the Euphrates, it was absorbed earlier into the empires of Assyria and Babylon. Following its successive destinies, Syria, after the death of Alexander, attained, under one of the heirs of his divided empire, a separate though not a native government. The powerful and warlike monarchy of the Seleucidæ endured until, after some brilliant efforts and with some glory, it was absorbed in the wide-spread empire of Rome. Syria was reduced completely to the condition of a province; but it formed always the centre of the Roman power in Asia, and Antioch was considered the eastern capital of the empire. On the decay of Rome, Syria was early occupied by the Saracens; although, as subordinate to Palestine,



References to the Map of Syria.

NORTH PART.

1. Jerablous
2. Dusharan
3. Sadjour
4. Membedj, or Bumbouch
5. Shihiet
6. Pittweil
7. Aadana
8. Bezay
9. Pasha
10. Jedriff
11. Hassan Pasha
12. Toimon
13. Hakiet
14. Abtareen
15. Zelchef
16. Chillis
17. Cerus
18. Sighalee
19. Calmale
20. Arshie
21. Derbesak
22. Aswad
23. Oseler
24. Bayas
25. Scanderoon
26. Bylan
27. Arsous
28. Roses
29. Kopes
30. Souadiah
31. Zeybon
32. Antakia
33. Alachan
34. Aggi Denges
35. Caramont
36. Posoul
37. S. Simon
38. Aleppo
39. Hasan
40. Najar
41. Gibly
42. Beles
43. Elbas
44. Jeboul
45. Ain Shaik
46. Khan Toumain
47. Kinesrin
48. Keffteen
49. Tesin
50. Salchein
51. Hamakia
52. Beit-el-ma
53. Soldeni
54. Shech Cui
55. Possidi
56. Lour-dee
57. Blatanous
58. Teneree
59. Edlip
60. Sermein
61. Malheuca
62. Erjill
63. Shuk Ailhas
64. Vordan
65. Reiha
66. Benin
67. El Bara
68. Baran
69. Djiser Shogher
70. Allenad
71. Sholfatia
72. Nahr Geber
73. Geber
74. Ros Cansir
75. Shamah
76. Candele
77. Latachia
78. Tower
79. Jebilee
80. Sihoun
81. Berzieh
82. Howash
83. Marah
84. Jerabolis
85. Eisal Cabad
86. Kalaat el Medyk
87. Khan Shekune
88. Sekeylebye
89. Kalaat Seidjar
90. Neby Meta.

SOUTH PART.

1. Caria
2. Markab
3. Alaria
4. Hussein
5. Nasib
6. Tortosa
7. Syafyttah
8. Masiat
9. Beyadhein
10. Mazyad
11. Byszyn
12. Hamah
13. Raston
14. Salemih
15. Esrse
16. Esrich
17. Wells of Imp. Malcha Giub
18. Almyrrha
19. Abvishai
20. Palmyra
21. Castle of Antura
22. Quarnan
23. Kalaat
24. Kalaat
25. Masna
26. Salmia
27. Hems
28. Janschiah
29. Nyszaf
30. Mar Dyordos
31. El Hosn
32. Rafinch
33. Avash
34. Mosque
35. Ortosa
36. Ard
37. Akmar
38. Kanobin
39. Baffif
40. Behirai
41. Detmiri
42. Tripoli
43. Amyoun
44. Temseida
45. Gebail
46. Akoura
47. Deir el Akhmar
48. Balbec
49. Escouetre
50. Zahle
51. Antoura
52. Haded
53. Beirout
54. Saide
55. Korie
56. Barouk
57. Bocat
58. Moiseloun
59. Daria
60. Meidan
61. Damascus
62. Meksan
63. Dammer
64. Mezel
65. Tall
66. Meneen
67. Kastel
68. Malula
69. Nebk
70. Kara
71. Kalm el Harme
72. Quadis
73. Riblah
74. Shemsir
75. Hassia
76. Owareen
77. Kariateen.

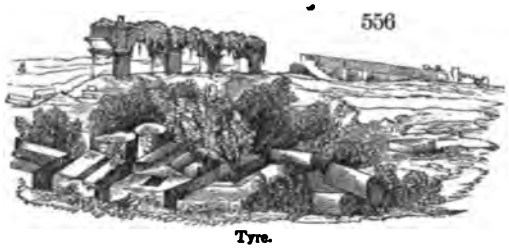
Rivers and Lakes.

a Euphrates, R.
b Aphor, R.
c Sadjour, R.
d Samjour, R.
e Salt Lake
f Kocie, R.
g Aphreen, R.
h Yogra, R.
i Aswad, R.
j Aazy, or Orontes, R.
k Corachee, R.
l Shabor, R.
m Mulk, R.
n Baniaz, R.
o Markab, R.
p Husseim, R.
q Kebir, R.
r Bered, R.
s Kades, R.
t Ibrahim, R.
u Leitani, R.
v El Bende, R.
w Bahr el Margi
x El Aazr, R.
y Nahr el Asi.

immense efforts were made by the crusaders to wrest it out of their hands. Syria, however, never assumed any independent aspect, and at last fell wholly under the Mahometan dominion. For the last three centuries it has continued subject to the Turks, except when agitated by the turbulent ambition of some of the pachas. Real independence has been achieved only in a certain partial degree by some of the mountain tribes, alluded to as inhabiting the ruder recesses of Lebanon, and who there, even in the very bosom of despotism, secure by their valour the enjoyment of the realities as well as the forms of liberty.

Syria, divided through its whole length by Lebanon, like a huge spine, is formed into two portions, entirely distinct; one bounded by the coast, the other by the desert. Both are narrow and fertile; they contain many great cities, both ancient and modern. Tyre and Antioch, in the maritime district, are pre-eminent among the former; while, in modern times, the interior cities of Damascus and Aleppo have preserved, or acquired, a superior importance. A grand feature is the Orontes, which, rising near the southern extremity of Syria, flows behind Lebanon through its whole length, until it turns its northern point, and passes by Antioch into the sea. Perhaps, however, it injures the fertility of interior Syria, by receiving and conveying away all the waters which flow eastward from the mountain, and which might otherwise have spread out, and watered a considerable portion of the sandy desert.

We shall commence our local survey with the southern maritime frontier. Here, proceeding from Acre, under which pachalic this part of Syria is still comprised, we come at once upon a name which revives the grandest recollections. The little fishing town of Sour, or Tsour, is all that remains of ancient Tyre (*fig.* 556.).



Tyre.

Modern times have seen the dread sentence fulfilled, that the queen of nations should become a rock, on which fishermen were to dry their nets. The accomplishment of that doom, however, has been modern; for even in the time of the crusades it had some importance, and, what is singular, was distinguished by its zeal in the cause of Christianity. It was under the Mahometan sway that its ruin was completed. Maundrell found it a mere Babel of broken walls, pillars, vaults, &c., without one entire house left. Only a few wretched fishermen harboured in the vaults, and plied their trade on the rocky coast. Of late, the governments, which had their seat at Beirout and Acre, have made some efforts to revive Tyre. A few tolerable houses have been built for the offices of government; and some of the Maronites, Motoualis, and other inhabitants of the neighbouring mountains, have been induced to settle there, and to undertake some trade. For this, scope is afforded by the grain, tobacco, and dried figs which are grown in the flat and somewhat fertile district by which Tyre is surrounded. The grain is sent to the islands; the other articles find a market in Egypt. Even under this faint revival, however, Tyre presents no image that can recall the memory of its ancient magnificence. Jolliffe heard the population estimated at 5000, with a doubt, however, which is strongly confirmed by Turner, who does not think it can contain above 200 houses, two-thirds of which are inhabited by Motoualis. The harbour can now admit only boats. There are traces of city walls about a mile in circuit, but none of any edifices more ancient than Christian churches, one of which is of very large extent. A priest still resides here, bearing the pompous title of Archbishop of Tyre.

From Tyre we proceed northwards by a very flat plain, which becomes continually narrower till we arrive at Sidon (*fig.* 557.), the sister city of Phœnicia, superior, it is said, in antiquity, yet second in greatness and fame. Though there is nothing corresponding to its ancient name, it has never suffered so total a downfall. A considerable trade is still maintained by the export of silk, and also of cotton, the spinning of which employs a considerable number of inhabitants. Sidon forms the principal port by which is carried on the maritime commerce of Damascus, from across the mountains. The vast moles, of which the ancient harbour was composed, are now entirely destroyed, though some of those huge stones which filled their entire breadth, may still be seen lying on the shore. Saide, like other Turkish towns, dirty and ill built, contains from 5000 to 7000 inhabitants.

Sidon.

Northwards from Saide, the level plain of Phœnicia ceases. Lebanon, here towering to its loftiest height, throws down its branches to the sea, between which only deep and narrow valleys intervene. This is the seat of the power of the Druses, that remarkable people, who have been already introduced to the notice of the reader. Their capital, or, at least, the residence of their prince or emir, is at Dair-el-Kamar, merely an extensive rough village, with from 15,000 to 18,000 inhabitants, and a large *serai* or palace, which has no pretensions to elegance. Their most important town is Beirout, the ancient Berytus, now almost wholly in their possession. The mountains here enclose a fine plain, covered with mulberry trees, on which is reared the finest silk in Syria. Its export, and that of cotton, cause some trade at Beirout, and support a population which Volney and Jolliffe estimate at 6000.

The next place of any importance is Esbele, called by Europeans Gibele, or Djebail; names which recall at once the Byblos of the Greeks, and the Gebal, whose ancient inhabitants, according to Ezekiel, were the calkers of Tyre. This place was the chief seat of the worship of Adonis, whose beauty and tragical history gained for him so conspicuous a place in the classic mythology. About a mile from Esbele flows the Ibrim, the ancient Adonis, the periodical reddening of whose waters, "supposed with blood of Thammuz yearly wounded," gave occasion to a wild and fantastic Phœnician festival. The circuit of the walls, about a mile in extent, was traced by Pococke, as well as the remains of a beautiful church of the Corinthian order, which must have been built in the fourth or fifth century: Volney reckons 6000 inhabitants.

Behind Djebail is the hilly district of Kesrouan, a lower and extended branch of Lebanon, on which the Maronites have formed their establishment. Considerably in the interior, and far up the ascent of Lebanon itself, is the monastery of Kannobin, the residence of their patriarch. It consists merely of a number of grottoes cut in the rock, the largest of which has been excavated into a tolerably handsome chapel. Beneath rolls a river between two very high ridges of pine-covered mountains; so that the scene is awful and romantic. The ascending road becomes continually more wild and rugged, with numerous cascades dashing down the rocks; yet a few villages still occur, delightfully situated, and surrounded with groves of olive and mulberry. At length the inhabited part of Lebanon is terminated by a Carmelite convent, dedicated to St. Sergius, which, in summer, forms a cool and delightful retirement; but the rigours of winter compel the monks to remove to Tripoli.

Although, however, human habitations be passed, the wonders of the mountain are not yet exhausted; for in a plain, enclosed by its highest summits, is found the small but precious remnants of the cedars of Lebanon. About fifteen large old trees alone survive of that mighty forest, which recalls so many sacred and poetical ideas. The trunks are ample, one of them measuring twenty-four feet in circumference; but they soon part into several limbs, which rise parallel to each other for some space, till they begin to extend horizontally. The foliage is wide-spreading, like that of the oak. The wood is fragrant and white, but not materially unlike common timber. The young cedars, which, with the old, form a grove of about a mile in circumference, appear to be quite of an inferior race, scarcely to be distinguished from the pines with which they are intermixed. Although the remnant be so small, yet Volney, in pronouncing the view to be wholly unworthy the fatigue of reaching it, appears rather insensible not only to the influence of associations, but to the magnificent scenery which the traveller discovers on this route. An ascent of three hours from the cedars brings him to the snow-covered pinnacle of Lebanon, whence he discovers all the varied aspect of its mountain regions; the rich plains at its feet, and the distant shores of the Mediterranean. Before reaching this point, however, vegetation has expired, with the exception of a few stunted cypresses, which lose their spiral form, and, throwing out their branches sidewise, have the appearance of small oaks.

From Djebail the road leads close along the sea, here bordered by the rocks of the Kesrouan, which shoot up into forms the most varied and picturesque. Nothing is passed except a paltry village, called Batroun, or Patrone, and a finely situated convent of the Greek Catholics, called Belmont. At length the route opens upon the plain of Tripoli, stretching far to the north, and one of the most extended and fertile in all Syria. At its entrance is found Tripoli, capital of the pachalic of the same name, which consists of this wide maritime plain, reaching nearly to the northern limit of Syria. A mountain chain, indeed, continued from Lebanon, still runs through the interior, parallel to the sea, but neither so broad nor so lofty. It is thinly inhabited by the Ansarians. The plain along the sea is broader there than in any part of Palestine or the ancient Phœnicia. This plain is well watered, covered with rich pasture, and with extensive groves of mulberry, orange, and other valuable trees. Notwithstanding these natural advantages, it has, we know not why, been neglected, having never contained a capital city, or been chosen as the central seat of any of the kingdoms established in Syria. Even the pachalic into which it was formed has of late, according to the alternations of power and influence, been merged into those of Acre and Damascus.

Tripoli is supposed by Burckhardt to contain 15,000 inhabitants, about a third of whom are Catholic Christians. It is one of the few Turkish towns which have any pretensions to

neatness, the houses being in general tolerably built, and of good stone. It is said to have been originally founded by three successive colonies from Tyre, Sidon, and Aradus; whence the Greeks called it Tripoli, or three cities. Some of the lower branches of Lebanon approach, and enclose round it a triangular valley, covered with the finest gardens and fruit trees. The situation is thus not only beautiful, but happily formed to command the advantages of every climate. It is, however, unfortunately subject to fever, in consequence of inundations made for the purpose of improving the growth of the mulberry trees. Under the crusaders this city was governed, with the title of count, by Bertrand, son of Raymond of Toulouse. Six large towers, which had been built for its defence, still remain; but no fine ancient edifices. The trade is considerable, and before the last war was chiefly in the hands of the French. Its exports consist of raw silk, soap, and some sponges which are collected on the sea-shore. The harbour is tolerable, and the marina, or port, inhabited by Greek sailors and shipwrights, forms a little town by itself.

About forty miles north of Tripoli is Tortosa, or Tortousa, once a very strong city, showing still the remains of two walls half a mile in circumference, the inner of which is fifty feet high. It contains also a beautiful church of the Corinthian order. Nearly opposite to Tortosa is the island of Rouad (*fig.* 558.), the ancient Aradus, the Arad of Scripture, whence Tyre is said to have drawn her mariners. It is a mere naked rock, in which the spring of water by which the inhabitants were anciently supplied can no longer be discovered; but its position protected it from the despotism of the princes on the continent, and drew to it a great number of inhabitants, to accommodate whom the houses were raised to a surprising height. Only a few strong masses of wall, and numerous cisterns cut in the rock, attest the former existence of this thriving commercial state.

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Island of Rouad.

In journeying to Latakia, a few striking objects present themselves; such are the strong castle of Merkab, seated on a hill, and about half a mile in circumference; the village of Banias, which scarcely presents any traces of the ancient city of Balanea; Jebilee, the ancient Gabala, equally poor in ancient and modern times. Much greater importance belongs to Latakia itself, the ancient Laodicea, founded by Seleucus Nicanor, and the port of Antioch. Its trade consisted in exporting to Egypt the fine wines for which the district was celebrated. At present, this, being a branch of commerce prohibited by the Mahometan religion, has been superseded by that of tobacco. The returns are made chiefly in rice. The port is now small, as the Turks have allowed it, in a great measure, to choke up; but it is still the most secure of any on the coast. It is said that twenty years ago, Latakia was a very flourishing place, containing 10,000 inhabitants, and that it had nearly supplanted Scanderoon as the port of Aleppo; but of late it has deeply felt the effects of that misgovernment which extends over all this quarter.

We have now traced the maritime plain of Syria, till it touches on that of Antioch, which forms the northern extremity of the kingdom, and which we shall consider in combination with that of Aleppo. It is time to retrace our steps, and, beginning afresh at the south, to survey the great plain situated on the opposite side of Lebanon, and bordering immediately on the desert, which forms Eastern Syria.

But before reaching this second division, a striking feature claims our attention. In crossing from Sidon to the plain of Damascus, the great mountain appears separated into two parallel portions, distinguished by the ancients as Libanus and Anti-Libanus. These enclose between them a broad valley, anciently called Cœlosyria, or the hollow Syria; by the moderns it is named the Valley of Beka. The reflection of the rocks and mountains renders it intensely hot; but it is extremely well watered, and yields abundantly either pasturage or grain, according to the industry of the occupants. Of late, Turkish oppression, and the inroads of the Arabs, have almost entirely annihilated the peaceful labours of the husbandman, and converted great tracts of this fine territory into a desert. This valley presents, however, one grand and important feature, the ruins of Baalbec.

Baalbec is situated at the northern head of this great valley, near to where the two Lebanons, uniting together, close in above its termination. From a town of some importance, it has dwindled into a decayed village, containing not more than 1000 or 1200 inhabitants. But Baalbec is famous for a mass of classic ruins, which, those of Palmyra excepted, nothing in Asia can rival. At the very entrance of the town, lofty walls and rich columns indicate

the site of an ancient temple. The principal gate, obstructed by stones and rubbish, enters into a court 180 feet in diameter, strewed with broken columns, mutilated capitals, and various fragments; around it is a row of ruined edifices which display all the ornaments of the richest architecture. At the end of this court, another gate introduces the spectator to the view of a still more extensive range of ruins. The court here is enclosed by chambers, seven of which may be reckoned in each of the principal wings. It is difficult to discover their use; but this does not diminish the admiration excited by the beauty of the pilasters, the richness of the entablature, the large foliage of the capitals, and the sculpture of wild plants with which they were ornamented. At the end of this court appears the grandest feature of the edifice: six lofty solitary columns, formerly the peristyle of the chief shrine, to which all the rest of this temple was only subordinate. The square marked out by their foundations is said to be 268 feet long, and 246 wide. The shafts of the columns are 58 feet high and 21 in circumference; their entire height 71 or 72 feet. The order is Corinthian, and the workmanship of the richest and most splendid description. To the left is a smaller temple, the walls of which, and the peristyle, composed of thirty-four columns, are still entire. After passing over trunks of columns, ruined walls, and other obstacles, the gate may be reached, and a view obtained of the interior, now roofless; but instead of the grand spectacle of a prostrate and adoring people, and of sacrifices offered by a multitude of priests, the light of heaven shows only a chaos of ruins covered with dust and weeds. Nature and barbarism have combined in demolishing this noble fabric. When Wood and Dawkins visited it in 1751, there were standing nine columns of the great temple: Volney found only six; and of the small temple they found twenty-eight, he only twenty. These have been partly overthrown by the earthquake of 1751, partly undermined by the inhabitants for the sake of the iron cramps, by which the several blocks composing the columns are so closely held together as not to leave room for the blade of a knife. Of these blocks, now lying on the ground, some are of enormous dimensions; three of 58, one of 69 feet long. The natives, astonished at the power by which these fragments have been transported, ascribe the origin of the edifice to genii acting under the orders of king Solomon. It is customary in these countries to refer every great work to that prince; and Volney, with some reason, derides the idea of his having erected a *Corinthian* temple; preferring on good grounds the tradition which refers the erection of this noble structure to the reign of Antoninus Pius. Dr. Richardson, however, conceived that he clearly discovered, under the Grecian orders, a trace of Jewish foundations; in which case Baalbec would form a very natural position for the "house of the forest of Lebanon," on which Solomon bestowed so much cost and care; and, when accident and time had demolished it, the new edifice might have been built upon its site.

After traversing all the branches of Lebanon to the eastern border of Syria, we arrive at the noble plain of Damascus. The environs of this city rank as the paradise of the East. Ranges of hills, branching off from the high chains of Lebanon, enclose it, and pour down numerous waters, which unite in forming the boasted Abana and Pharpar of the ancients. These waters, indeed, cannot penetrate beyond the desert boundary on the east, where they are soon evaporated in a large lake; but before reaching it, they irrigate every portion of the plain and even of the city, and communicate to the former its matchless beauty and fertility. There is, perhaps, no city which has had a longer duration. From the earliest ages the existence of Damascus has been recorded, and always as a great capital. It is named in the history of Abraham; it is celebrated for its wars with the kings of Israel; it has survived all the variety of desolating revolutions which have passed over this part of Asia. Under the Turkish empire it has maintained a high importance, being on the route of the great caravans to Mecca, whence even the Turks esteem it holy, and call it the "gate of the Caaba." This causes not only an immense resort, but a great trade, which the pilgrims are careful to combine with the pious objects of their journey. Damascus has lost the manufacture of sword-blades for which it was famous in the middle ages; but it has still considerable fabrics of silk and cotton; and the fruits of the neighbouring plain, dried and prepared into sweetmeats, are sent to every part of Turkey. It is at present the most flourishing city in Syria; a distinction which it owes to the excellent character of several successive pachas, through whose exertions the whole of their territory has assumed an improved and cultivated aspect, which strongly contrasts with the desolate condition of that of Acre. Damascus is built of brick, and its streets are narrow and gloomy, like those of all other Turkish cities, the people reserving their magnificence for the interior courts and palaces. The great mosque, of which Europeans can obtain only stolen glances, is very splendid, and the bazaar has no rival in the East for convenience and beauty. Several of the streets have rivulets running through them, which afford plentifully the great eastern luxury of water. Many of the coffee-houses are built on the banks, and the Turk enjoys the luxury of smoking and sipping his coffee while the cool stream is flowing at his feet. The delight of the Damascenes is to make excursions into the environs of the city, adorned with numberless gardens, and to the "plain of roses," covered with that beautiful flower in its utmost perfection. The Hebrew name of Damascus, or Demesk, is not now known to the Orientals, who call it Sham, or El Sham.

The inhabitants, amounting to about 100,000, have a bad reputation in the East, where *Sham Shoumi*, "the wicked Damascene," has even passed into a proverb; but perhaps the alliteration may have had some share in promoting its currency.

Almost all the remainder of the plain of Eastern Syria is watered by the Orontes, in its long course from south to north along the foot of Lebanon. Though it has not the brilliancy and beauty of that of Damascus, it is yet well fitted for grain and pasturage, and anciently produced them in abundance. In modern times, from its exposure to the plundering Arabs, against whom the government has not energy to defend it, it has been in a great measure abandoned. On this route, however, occur two celebrated cities, still not wholly deserted. The first is Hems, about 100 miles north of Damascus, on the site of the ancient Emesa. It was a considerable place under the Roman empire, having acquired notoriety, though not glory, as the birth-place of Heliogabalus. At present, only a fourth of its site is occupied; and the place is noted merely for some antiquities of inferior importance. Forty miles farther north is Hamah, once supposed to be the ancient Apamea, but which Pococke seems to have proved to represent Epiphania. That traveller found in it no coins more ancient than those of the Greek empire. Hamah, which Volney reckoned at only 4000, is supposed by Burckhardt to contain 30,000 inhabitants. They subsist chiefly by supplying the wants of the Arabs, who roam over the vast desert to the east as far as the Euphrates. These freebooters are deterred from their usual violent proceedings, partly by a tacit convention, but more effectually by a body of 300 or 400 horse, stationed here for that purpose by the Pacha of Damascus. Famieh, called by Burckhardt Kalaat-el-Medyhr, is a mere village, with an old castle, containing all that remains of the real Apamea. This spot, where the kings of Syria once maintained 500 elephants and 30,000 horses, is now so marshy and inundated, that it can scarcely support a few buffaloes. Volney allows it 2000 inhabitants. It is situated near the banks of a considerable lake abounding with fish.

As the Orontes approaches the lower part of its course, it is bordered on the east by a range of mountains, which reduces to a breadth of six or seven miles the valley through which it flows. This valley, inundated during the summer, yields fine pasture. Burckhardt there found the village of Hoashu, containing about 140 houses; and farther down, on the borders of the territory of Aleppo, is the large but dirty town of Shogger, or Shoggle.

That we may visit Palmyra before quitting the Orontes, we must make an excursion into the depth of the Syrian desert, which extends far to the eastward. The traveller sets out from the small village of Hassia, to the south of Hems. He finds himself on a great naked plain, where the stunted shrubs afford but a scanty browsing to the antelope. At the distance, however, of every three or four hours of march, occur little villages, or rather clusters of huts, where rest may be obtained: Sodoud, Houarein, Karietein. From the last place Palmyra can be reached only by a march of twenty-four miles over an expanse of uninterrupted desert. When this weary route has been passed, the hills, which have hitherto run in parallel lines about ten miles distant from each other, close in, and form a narrow valley, traversed by a ruined aqueduct, and on whose sides appear a number of tombs. At length the valley opens, and the eye is struck with a most amazing extent of ruins, covering a wide expanse of the desert; behind which, towards the Euphrates, stretches a level waste, as far as the eye can reach, without any object manifesting either life or motion. In this surprising scene, the front view presents a range of Corinthian pillars, occupying a space of more than a mile, and behind which, crowds of other edifices appear in dim perspective. The grandest, and also the most entire structure, is that called the Temple of the Sun. The court of this temple has a wall nearly complete, in which appear twelve noble windows. Behind rise the ruins of the temple itself, almost wholly composed of magnificent ranges of Corinthian columns (*fig.* 559.) supporting a rich entablature, which has, partially at least, resisted the injuries of time. The eastern gateway, on which all the resources of Grecian art have been lavished, is still in a tolerably perfect state. A noble arch, farther to the right, forms the commencement of a truly superb colonnade, which, even in its shattered and broken state, may be traced to the distance of 4000 feet. The vacuities left by the fallen columns open a view to the other ruins; and the remains of magnificent structures are seen though the intercolumniations. Sometimes a group of three or four columns, standing entire, indicates some grand edifice, of which they are all that is left. But besides these ruins, from which definite indications may be drawn, a vast number of scattered columns cover the plain, some with and some without their entablatures; and the ground is every-

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Palmyra.

where strewed with broken pillars, scattered capitals, defaced sculptures, and large marble fragments, all lying prostrate in the dust.

The early and high importance of Palmyra, or Tadmor, appears evidently derived from its being the channel by which Indian commodities passed across the desert to the countries of the west. Solomon, who occupied and enclosed it with strong walls, is reported as its founder; but was probably attracted by the wealth which commerce had already drawn to this desolate spot. The historical greatness of Palmyra, however, began only in the reign of Aurelian, when the spirited and high-minded Zenobia ventured to establish it as an independent kingdom, and to set at defiance the master of the Roman world. The issue of this daring attempt was fatal; Zenobia was carried in chains to Rome; and Palmyra never again recovered its prosperity. At present, beneath these hallowed monuments of a polished people are seen about thirty mud-walled cottages; the inhabitants of which, poor in the extreme, obtain a subsistence by cultivating a few detached spots, and feeding some flocks of goats and sheep. Two small tepid streams, impregnated with sulphur, which traverse the ruins, and are absorbed in the sand, might to ancient industry have afforded facilities for considerable culture.

Another portion of Syria still remains, which has long been pre-eminent over the rest in power and commerce. It constitutes the pachalic of Aleppo, a sort of division which we have not much regarded, but which here coincides with that formed by nature. The vast mountain chain which has hitherto crossed Syria from north to south, sinks gradually, until it entirely disappears; but the mighty range of Taurus, projecting from Asia Minor, and crossing towards the Euphrates, here forms the northern boundary of Syria. It leaves, however, an interval of luxuriant plains and groves, which long rendered this region the pride of Syria, and the chosen seat of pomp and pleasure. Antioch, both under the Greek kings and under the Roman dominion, was celebrated as the gay capital of the East. Under the Turkish government it has yielded precedence to a rival of later origin.

Aleppo, the modern capital of Syria, is, as it were, only an outpost of that country, and half belongs to the desert. From a number of low hills, however, which surround the city at a few miles' distance, streams descend, which water the chalky soil of the environs, and enable them to be formed into those beautiful gardens, with which the inhabitants of the East studiously surround their cities. Those of Aleppo are chiefly filled with fruit trees, of which the pistachio is the special boast. The city has some marks of antiquity, though none of them striking, and is usually supposed to be the ancient Berœa. It is built on several hills, above which are seen towering numerous minarets and domes which command a delightful prospect, especially to the eye fatigued with the monotony of the brown and parched plains that stretch around. Aleppo is very populous; Dr. Russel, who resided there for many years, reckons the number at 235,000, and is probably more to be depended on than other early travellers, who raise it to nearly 300,000. Volney, on the other hand, calculating that Aleppo does not stand on more ground than Marseilles or Nantes, and that the houses have only one story, reduces the estimate to about 100,000; but these data seem too vague to stand against the positive and careful calculations of other travellers. Seetzen has lately assigned 150,000; but whether that number result from a decline in the place, or a different mode of estimate, may admit of question. Aleppo is generally accounted the third city in the Turkish empire, yielding only to Constantinople and Cairo. This greatness it owes to the vast extent of its inland trade, for which it is most favourably situated, in front of Syria, and in close vicinity to Asia Minor, Armenia, and Persia. It is also a rendezvous for pilgrims from all these countries to Mecca. Although it contains no grand monuments, nor even any very magnificent modern edifices, it is yet reckoned the neatest and best built of the Turkish cities. At least its streets have those negative qualities which are almost all that can be expected in an Eastern city. They are less narrow, less dirty, and the walls, built of a species of white stone, have not quite so gloomy an aspect. The society is also represented as displaying more of toleration and urbanity than that of other Mahometan cities. This may be chiefly owing to the many strangers, of all religions, who are attracted by its commerce; since the Christian population alone is reckoned at 31,000, and the Jewish at 5000. A violent principle of schism had, however, always subsisted between the janissaries on one side, and the pacha with his adherents on the other. While the Ottoman power remained entire, the latter easily maintained their predominance, and the discontent of the janissaries was vented in occasional tumult or impotent growling. In 1804, however, after a somewhat bloody contest, they succeeded in making themselves masters of the city. Aleppo thus, like Algiers and Tunis, became subjected to the sway of a turbulent soldiery. It suffered, but not in an equal degree. The janissaries preserved a good police, and chiefly employed themselves in systematically extorting as much money as possible from the inhabitants. Each of the latter was obliged to purchase, at a high rate, the protection of a janissary, and having paid this price he was secure in the possession of his remaining property.

Within the last 14 years Aleppo has been visited by a calamity of the most dreadful nature, which has rendered its future existence as a city problematical. On the night of

the 13th of August, 1822, not only the city itself, but every town and village in the pachalic, were shaken almost to pieces by an earthquake, which was felt from Diarbekir to Cyprus. The most appalling picture is drawn of the horrors of that dreadful night; the awful darkness, the quick repetition of the most violent shocks, the crash of falling walls, the shrieks, the groans, the accents of agony and despair, with which the city resounded. Twenty thousand persons are supposed to have been killed, and the same number bruised and maimed. Those who, amid falling houses, through heaps of rubbish, and stumbling over dead bodies, succeeded in reaching the open fields, found themselves destitute even of food and shelter. Exposed to a tropical sun and to nightly damps, and scantily fed, a large proportion became a prey to disease; and even the liberal subscription collected in London for the sufferers proved a very inadequate relief. It has been supposed that Aleppo would never again rear its head, and that its commerce would be removed to Smyrna. But its site possesses advantages which cannot be transferred elsewhere, and which must always, it should seem, occasion the existence of a great city in this part of Syria.

The remaining cities in the pachalic of Aleppo present only faint traces of that grandeur by which they were formerly distinguished. Antioch (*fig.* 560.), or Antakia the ancient queen of the East, is only a poor, ill-built, little town, containing, according to Colonel Squire, not more than 11,000 inhabitants. This city was built by Antiochus and Seleucus Nicanor, and was the capital of the Græco-Syrian dynasty. Under Rome its wealth and distinction were still further augmented; and it became, at an early period, the seat of the most flourishing of the Christian churches. In the great crusading expedition, Antioch was the first place which fell into the hands of the Christians; and it continued a main centre of their power till 1269, when it was taken by Bibars, the sultan of Egypt. All the fury of Mahometan bigotry was then let loose upon a city long supposed a main bulwark of the Christian power. Its churches, accounted the finest in the world, were razed to the ground, and the site of those edifices, once the boast of Asia, can now with difficulty be traced. Aleppo, under Moslem auspices, became the emporium and capital of Syria; and Antioch soon sunk into insignificance. For the reason above stated, scarcely a remnant is left of those structures which rendered it the pride of the East. The most remarkable object is a portion of the city wall, which has resisted so many disasters, and even earthquakes. It is of great strength, built of stone, and defended by noble towers, at equal distances. In some places it is carried up the hills which border the city on the side opposite the Orontes; in others, along almost perpendicular heights. Yet a walk, rendered accessible by steps, has been carried all round it. The aqueducts also remain, and are fine, though not more so than those of some other Eastern cities.

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Antioch.

The environs of Antioch have been particularly famed for their luxuriant and romantic aspect. Indeed, the banks of the lower Orontes, for a considerable space, are said to equal any thing in the world in point of picturesque beauty. Mount Casius, the termination of Lebanon, towers above it to a very lofty height, and the inferior mountain ranges run along the river, presenting broken precipices, rocks, and caves overhung with a luxuriant variety of foliage; myrtle, laurel, fig, arbutus, and sycamore. Travellers have particularly sought the groves and fountains of Daphne, celebrated for the temple of Apollo, and the dissolute superstitions of pagan Antioch. The site is usually fixed about five miles from the city, on the road to Latakia, and on a spot where a number of fountains, bubbling out of the earth with a loud noise, terminate in two beautiful cascades which fall into the valley of the Orontes. Instead, however, of magnificent temples and stately groves, it exhibits only a few clay-built water-mills surrounded with dwarf myrtles.

On a plain to the north of Orontes is the straggling seaport of Suadiah, and near it the remains of Seleucia Pieria, a city of great importance under the kings of Syria. Strength seems to have been chiefly studied, with the supposed object of forming a retreat in case Antioch should ever fall into the hands of an invader. There are still remains of a double wall built on high cliffs overlooking the bed of a mountain torrent. The outer wall is built of very large stones, and the inner defended by turrets of fifty paces apart. There are also remains of large piers which formed and defended the harbour. Pococke calls this place Kopse, and notices a singular ornament used there by the females, consisting of coins stuck round their head-dress, many of which, having been obtained from the ruins of Seleucia, were valuable as antiquities.

About thirty miles to the north-west of Antioch is Scanderoon, or Alexandretta, which the

Turks made the port of Aleppo. It possesses a very fine road, the only good anchorage in all Syria. On the other hand, extensive surrounding marshes render the town subject to epidemic diseases in a degree beyond any other in the Turkish dominions. Being, therefore, inhabited only by those whom the absolute necessities of commerce compel to make it their residence, it has never been any thing more than a large open village; and, of late, a great part of its trade has been transferred to Latakia. The only resource which the residents of Scanderoon possess, is an occasional retirement to Bylan, a cool and delightful village, situated among the mountains of the east. The houses are built along the declivity of a hill, so that the terraced roofs of one row serve as streets to the row immediately above.

Subsect. 3.—*Asia Minor.*

Asia Minor, another of the great divisions of Asiatic Turkey, derives a deep interest from sources unconnected with the degraded race by which it is now ruled. Its physical features, indeed, are not on so sublime a scale, nor does its past history recall events so awful and solemn as those which distinguish the banks of the Jordan and the Orontes. Still, the scenes of nature which it presents are full of grandeur, and its antiquities are replete with historical interest.

Asia Minor forms a large oblong peninsula, about 700 miles in length, and somewhat more than 400 in breadth. It is almost completely separated from the rest of Asia, not only by the sea, which surrounds the greater part of it, but by the almost impassable mountains and elevated wastes which closely bar the broad isthmus by which it is joined. The structure of this country is remarkable. Its interior is completely encompassed with a girdle of lofty mountains. They run parallel to the sea-coast, sometimes closely approaching it, sometimes leaving intermediate plains and valleys of considerable extent. On the south runs the celebrated chain of Taurus, which extends across to the Euphrates, and was supposed by the ancients to intersect the whole of Asia. On the west it is continued by Tmolus and Sipylus, and these lock in with the northern chain, of which the most remarkable summits are those denominated Ida and Olympus. We give the classic appellations; for Ala Dagh, Baba Dagh, and other uncouth names imposed by its present possessors, will scarcely be endured by European ears. These mountains enclose a vast interior hollow, which is however, considerably elevated, and into which they pour almost all their waters. We must, indeed, except those of the east, which are conveyed by the Halys, the modern Kizil Irmak, into the Black Sea; and part of the western waters, which find their way by the Sangarius into the same receptacle. But Mr. Leake calculates that there is an interior space, of 250 miles in length and 150 in breadth, of whose copious waters no part finds its way to the sea. They terminate in a long chain of little saline lakes, and during the rainy season cause wide inundations. It is even supposed that, at that period, the whole region would be laid under water, but for some elevated ridges by which it is penetrated. A territory covered with such profuse moisture would require a more industrious people than the Turks, to render it fit for the production of grain. It forms an immense range of pasture, over which are fed numerous flocks of sheep, droves of horses, and, in the hilly tracts, herds of goats; while the inhabitants lead nearly the same irregular and nomadic life which prevails among the Tartar hordes.

The part of Asia Minor which intervenes between the mountains and the sea presents a different and more smiling aspect. This is particularly the case with the western tracts of the peninsula. The Cayster, the Caicus, the Meander, and the Hermus, roll through enchanted valleys stored with the richest gifts of nature. Taurus, on the south, presses closer upon the sea; but it still leaves ranges of finely watered, though not extended, valleys. On the northern shore, also, which extends along the Euxine, the interval between the mountains and the sea is often very narrow; though the plains of Sinope, of Amisus, and of Trebisond have been the seat of great and powerful kingdoms. They are marked, however, rather by the substantial productions of grain and pasturage, and in the mountains by the useful minerals of copper and iron, than by the gay fruits and smiling luxuriance of the south and west.

In history, the interesting transactions connected with Asia Minor have been so numerous and varied, that we can attempt only a very rapid enumeration. The first picture is that of its nations when arrayed against Greece in the Trojan war. Troy, in that great contest, drew auxiliaries from Caria, Lycia, Mysia, Phrygia, and Mæonia, so that it became almost a contest of Greece against Asia. Even the Greek pencil of Homer seems to delineate on the Asiatic side a people more polished and humane, though less energetic and warlike, than their invaders. Afterwards in the republics of the refined and effeminate Ionia, we find an early perfection of the sciences, poetry, music, and sculpture, then unknown to Greece, though that country, in arts as well as in arms, soon eclipsed the glory of its masters. Here, too, the kingdom of Lydia was early famous, first for power, but much more afterwards for wealth and luxurious effeminacy. These unwarlike states soon yielded to the arms of Persia, were included within its empire, and their arts and resources served only to swell the

pomp of its satraps. In this humiliating situation, they lost all their former high attainments; and it became of little importance that they passed sometimes under the sway of Athens, and were ruled by Greeks instead of barbarians. After the conquest of Alexander, however, and when his rapidly formed empire fell so suddenly to pieces, some of the most conspicuous among the fragments were kingdoms established by his successors in Asia Minor. It was there that Antigonus and Demetrius collected a great portion of the resources with which they made such a mighty struggle for the supremacy among the Macedonian chiefs. After their fall, the kingdom of Pergamus was founded, whose princes, by their own ability, and the alliance of the Romans, became for some time the most powerful in Asia. Their glory, however, was surpassed by that of a kingdom formed in the opposite quarter of the peninsula, that of Pontus, by the powerful character and high exploits of Mithridates, under whom the last great stand was made for the independence of the world, which with him finally sunk. Asia Minor was reduced completely into a Roman province, and made few and feeble attempts to shake off the yoke. It was chiefly distinguished in ecclesiastical history by the formation of apostolic churches, and the assemblage of general councils; of which those of Nice and Chalcedon, in particular, had an important influence on the belief and worship of the Christian world. Protected by its distance from Arabia, and by the mountain chains of Taurus, this peninsula escaped in a great measure the tide of Saracen invasion. That great succession of hordes, however, who, under the appellation of Toorks or Turks, poured down from the north-east of Asia, after conquering Persia, crossed the Euphrates, and established a powerful kingdom in Caramania. Being divided, and crushed under the first successes of the crusaders, the Turkish power sunk into a languishing and almost expiring state. Suddenly, however, from its ashes, rose the family of Othman, who, collecting the Turkish remnant, and combining it with the neighbouring warlike tribes, allured or compelled to this standard, formed the whole into a vast military mass, which there was no longer any thing adequate to oppose. This power continued to have its principal seat in Asia Minor, until Mahomet II. transferred to the Ottoman Porte the dominion of the Cæsars, and made Constantinople the capital of his empire. Asia Minor has always continued more entirely Turkish than any other part of the empire; and it is thence chiefly that the Porte continues to draw those vast bodies of irregular cavalry which form the chief mass of its armies. The peninsula has not, however, been exempted from that spirit of revolt which, amid the weakness lately exhibited by the Porte, has become so universal. The different pachas act nearly as independent princes, make peace or war with each other, and can only be displaced by manœuvre or intrigue. Paswan Oglou, in particular, established at Uskut an independent kingdom, supported by an army of 40,000 men, and scarcely yielded to the Porte a nominal submission.

The Turks have made a political division of Asia Minor into pachalics; of which the principal are Anadoli on the west, Trebizond on the north coast, Sivas and Konieh in the interior, Adana on the south coast, and the Mussellim of Cyprus. For reasons already stated, however, we shall not pay much regard to this ephemeral division, but recognise the country chiefly under other names which, though unknown in its present fallen state, are alone interesting to a European reader.

The local survey to be made of this region, will most advantageously commence from the south-eastern corner, where the narrow pass of Issus allows the only communication with Syria and the countries on the Euphrates; and where Alexander, by a signal victory, opened his way into the boundless regions of Asia. Pococke and D'Anville place this celebrated spot near the village of Ayas, in a plain two miles long, and three quarters broad, enclosed between the hills and the sea. Mr. Kinneir, after a careful survey, seeks to transfer it to another plain more spacious, two miles in width, hemmed in by loftier mountains, and about sixteen miles north of Scanderoon. He contends that this space was necessary to enable two such armies to be drawn up in order of battle; and that it agrees with the data given by the ancient historians and geographers. We have not space to enter into the minute details of this controversy. Pias was till lately the wealthy and populous seat of a marauding freebooter, who plundered the caravans, and laid the neighbouring districts under contribution; but the Porte having succeeded in reducing him, his capital also went to ruin.

The ancient Cilicia, now the pachalic of Adana, consists of two districts; the mountain range, composed of some of the most lofty and rugged branches of Taurus; and the level tract, composed of the two considerable and extremely fruitful plains of Adana and of Tarsus. Adana, situated on the Sihoon, the ancient Sarus, is a very ancient capital, and still a flourishing town surrounded by extensive cotton plantations, tolerably built, and presents, in testimony of its former magnificence, some walls and a magnificent gateway. Its situation is agreeable, on a declivity above the river, which is larger than the Cydnus, and enclosed by fruit trees and vineyards. Tarsus retains its name and its position on the Cydnus; but Mr. Kinneir sought in vain for any monuments corresponding to its great name. The materials of all its ancient structures seem to have been taken down to build the modern city, which has thus a neater appearance than is very usual in Turkey; but as these fine hewn stones are merely built into houses of one story high, the place has no air of mag-

nificence. Tarsus was not only the capital of Cilicia, but, under the auspices of Rome, rose to be one of the principal cities of the empire, both for wealth and for the cultivation of science and literature. It may be recollected as being the birth-place of St. Paul; and there is still an ancient church which bears his name. Tarsus continues a populous and stirring place. Its population, as well as that of Adana, is estimated at about 30,000 each; to a great part of whom, however, these cities afford only winter quarters. The Turcoman shepherds who, in summer, pasture their flocks on the heights of Taurus, during the rigorous season seek shelter for them in the rich plains around these cities. That of Adana is of exuberant fecundity, and, being tolerably cultivated, yields wheat, barley, sesame, and cotton, not only for home use, but in large quantities for exportation. To these are added copper from the northern districts, and gall-nuts from the mountains. The returns are taken in coffee, rice, sugar, and hardware. Tarsus, however, is seven or eight miles from the sea.

To the east of Adana is another plain equally fertile, on which the ancient Mopsus, or Mopsuesta, is still found under the name of Messis. This place, however, has been occupied by a band of Turcoman depredators, who have reduced the plain around to a state of desolation, and the place itself to a poor village, composed of mud cottages.

At the western boundary of Cilicia begins the coast of Pamphylia, to which the moderns give the name of Caramania, from an early Turkish kingdom formed upon the coast, of which Karaman, in the interior, was the capital. This tract consists of a succession of valleys separated by ridges that branch from the loftier heights of Taurus. These valleys, though often narrow, are usually watered by fine streams, and very fertile. The ridges often terminate by presenting to the sea, in the boldest and most picturesque forms, lofty perpendicular cliffs of limestone or marble.

Selefkeh, on the Ghiuksu (the ancient Calycadnus), a river of some magnitude, is merely an assemblage of cottages built of wood or earth; but near it are considerable vestiges of the ancient Seleucia. There is a theatre partly cut out of the side of a hill; and in front of it a long line of porticoes and other remains of large ancient edifices. In the vicinity is an extensive necropolis or cemetery, consisting, as usual, of numerous tombs cut in the rock, with some sculpture, and a variety of inscriptions. An aga resides here, subject to the governor of Cyprus. Farther up the river, near its junction with a tributary called the Erminah, is Mout, a miserable village of 200 hovels, built with reeds and mud, while some wretched inhabitants seek their abode in the rocky caverns. This, however, was the site of a magnificent ancient city, supposed by Mr. Kinneir to have been Philadelphia, the plan and principal edifices of which may be distinctly traced. The cottages are intermingled with long colonnades and porticoes, still partially standing; and pillars of verd antique and other marbles lie half buried, or covered by ruined mosques and houses. The castle is large, and nearly entire; it is built on a precipice overhanging the Ghiuksu; its walls are surmounted with battlements flanked by square towers open to the interior. This scene of wretchedness, the result of misgovernment, is found in a valley, the aspect of which promises peculiar fertility. It abounds also with the most beautiful scenery; the pastures, groves, and streams, of the lower tracts contrasting admirably with the majestic forms of the mountains above, and the dark woods with which they are covered.

Proceeding westward along the coast from Selefkeh, is found Kelendri, called by the Turks Gulnar, a few wretched hovels, built amid the ruins of the ancient Celenderis, which lie about in scattered and mouldering heaps. Here, however, a magazine and a custom-house are kept, to maintain the communication with Cyprus.

Looking from Kelendri, on the opposite side of a small bay, a grand feature presents itself in Cape Anemour, the most southerly point of Asia Minor, presenting to the Mediterranean a bold, and on one side inaccessible, cliff. The other side is secured by a castle, and a double range of lofty walls, within which are the remains of the ancient Anemuria. It appears to have been considerable; but scarcely a block or fragment of marble remains. Only the abodes of the dead remain entire, exhibiting a remarkable proof of the durability of their materials, compared with those which formed the habitations of the living. These tombs, many of which display considerable magnificence, have all been opened; but their walls are still standing. The spot is entirely deserted; but about six miles distant is the modern castle of Anemour, a large edifice, now going to ruin.

Cape Anemour is succeeded by a range of rocky coast, at only two points of which torrents penetrate into the sea: here ruins are all that indicate the site of Charadrus and Antiochia ad Cragum. At the end of this coast, the lofty and romantic cliffs of Cape Selinty project into the sea. On its pinnacle are the remains of a castle, which looks down perpendicularly from a great height upon the waters. At its foot, along the banks of a river, are the foundations of large edifices and bases of columns in long ranges, all the superstructures having been carried away. These are the remains of Trajanopolis. To the west is a beautiful plain, five or six miles in extent.

Proceeding westward, the traveller meets numerous towns and villages, modern upon ancient sites, but both deserted, bearing marks of the desolation which now reigns in this part of the empire. At length are espied the white cliffs of Alaya, rearing themselves high above

the waves. This mountain fortress, called in the middle ages Castle Ubaldo, is compared by Colonel Leake to a second Gibraltar. Two of the sides are absolutely perpendicular, the other is completely fenced with high solid walls and towers. The town, situated near the foot of the hill, is about a mile in circuit. It scarcely contains any vestige of Coracesium, on whose site it stands; and as a modern town, though the residence of a sangiack, it is poor, destitute of commerce, and thinly peopled, having, according to Captain Beaufort, only 2000 inhabitants.

On a low and desert promontory, to the westward of Alaya, Captain Beaufort discovered the superb monuments of Side. They are numerous; but the prominent object is a theatre, the most extensive preserved among those of the many Greek cities of Asia Minor. It is half excavated, half composed of masonry, and has an exterior diameter of 409 feet. There are forty-nine rows of seats, all of white marble, and of admirable workmanship. On these might sit 13,370 persons; and by standing or sitting on the steps, an audience of 15,240 might be accommodated. Among other remains are those of a building dedicated to astronomical purposes; those of a spacious bath; and many others, now scarcely to be distinguished amid the thorns and brambles with which they are overgrown. The traces of a spacious double harbour accord with the report given by Livy, of the naval skill and prowess of the Sidetians.

Passing Laara, the ancient Magydos, Dashashehr, and some smaller places, we come to Attalia, called by the Turks Adalia, and by the Italians Satalia, the principal town in this quarter. Attalus Philadelphus, by whom it was founded, made it his capital, and spared no cost in adorning it. The situation is peculiarly beautiful, along the side of a rising hill which fronts the sea, and upon which the streets are arranged like the seats of a theatre. Its ancient importance is attested by numerous granite columns and fragments of sculpture, particularly by a magnificent gateway of the Corinthian order. The gardens behind, interspersed with country houses, are filled with the finest fruit trees, and refreshed by the breezes from Mount Taurus. The population is estimated at 8000, of whom two-thirds are Mahometan, and the remainder Greek. A considerable trade has of late been carried on in grain, which is copiously produced in the surrounding fields, watered by streams that are loaded with calcareous deposits.

The coast now takes a southerly direction, forming a side of the deep bay at the bottom of which Attalia is situated. On this coast are found the ruins of Phaselis, in a swampy and unhealthy situation, at the foot of Mount Solyma, which rises to the height of 7400 feet, and by its frowning aspect, and the formidable sounds which echo through the caverns, inspires the natives with superstitious dread. Deliktash, situated on a plain, enclosed by mountains, is filled with the remains of the ancient Olympus. Its name, signifying the perforated rock, designates the principal object for which it is remarkable. Places of only secondary importance occur until, after passing Cape Chelidonia (the ancient Promontorium Sacrum), and reaching the river Andraki, we discover the ruins of the ancient and celebrated city of Mira. A theatre, tolerably entire, 355 feet in diameter, with other remains of public buildings and inscribed sepulchres, mark its ancient splendour. It is situated three miles up the river, in a plain, fertile, and tolerably cultivated. Westward, along the coast, is a crowd of rocky islands, abounding with fine creeks and bays, which might render them the seat of a considerable commerce and population. That they were so anciently, appears clearly from traces left on those of Kakava and Casteloriso.

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Theatre at Macri.

Winding round the interior of a deep and circuitous bay, we find at its eastern head Macri. This town, having an excellent harbour, is employed by the government as its medium of communication with Egypt. It exports firewood to that country; timber, tar, cattle, and salt to Rhodes. It is, however, rendered extremely unhealthy by an almost constant malaria, arising partly from the damps of ancient edifices, partly from its situation, in a pit, as it were, amidst overhanging mountains which produce confined air and frequent chilling breezes. Nothing can exceed, in gloomy grandeur, the aspect of this part of Asia Minor, presenting an unbroken range of mountains, the tops of which are covered with perpetual snow.

Near Macri are the ruins of the ancient Telmessus, which rank with the grandest and most perfect of any in Asia Minor, and have been described by Dr. Clarke in a manner peculiarly careful and interesting. The first object which strikes the spectator from the sea, consists of the remains of a spacious theatre (*fig.* 561.), built on the side of a mountain, to whose shelving sides the structure was adapted. Several of its portals are yet standing, of enormous magnitude, and built of stones eight or ten feet long, put together without any cement. Dr. Clarke observes, that, "in the plans of Grecian architects, the vast operations of nature were rendered subservient to works of art; for the mountains on which they built their theatres possessed naturally a theatrical form, and towering behind them, exhibited a continuation of the immense koilon which contained the seats for the spectators, giving a prodigious dignity to their appearance. Every thing at Telmessus is Cyclopean: a certain vastness of proportion, as in the walls of Tirynthus or of Crotona, excites a degree of admiration mingled with awe; and this may be said to characterise the vestiges of the Dorian style all over Asia Minor." Peculiar care has here been taken in adorning the tombs both with sculpture and architecture. The greater have both their interior chambers and the columns in front excavated out of the solid rock; and the stones are joined together so nicely, as to make it almost impossible to discover the entrance. Other tombs represent the Grecian soros, consisting of huge single stones pitched often on the summits of high rocks. Others, again, consist of a number of these stones joined together; and one was of such magnitude, that Dr. Clarke conjectured it might be the mausoleum of Artemisia (*fig.* 562.).

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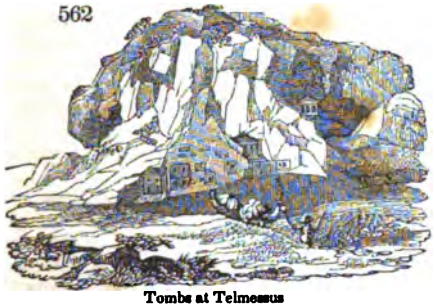

Tombs at Telmessus

Emerging from the Gulf of Macri, and passing along the deserted sites of Calynda and Caunus, the former capital of Peræa, the navigator descries a narrow passage, through which, if his vessel reach the dimensions of a frigate, he will work his way with some difficulty, unless the wind be favourable. On entering, however, he finds himself in the spacious bay of Marmorice, twenty miles in circumference, and which its lofty wooded shores secure from every wind. The town, at the head of the bay, is small, composed of whinstone cottages like those in the highlands of Scotland.

As we approach the confines of Ionia and the western coast, the monuments of antiquity become more numerous and striking. The two deep bays of Symi and Cos, which follow almost immediately after that of Marmorice, are nearly unexplored by the moderns. At Cape Crio, however, the point of separation between them, are found the extensive ruins of Cnidus. No Greek city is said to present more varied specimens of ancient architecture; and in none has the work of destruction been more active. The whole area of the city is one promiscuous mass of ruins, amongst which are numbered three theatres, one of them 400 feet in diameter; several temples, many tombs, and some superb fragments of sculpture. The white marble steps of one of the theatres may still be found buried under the grass and bushes, and near it are the fragments of a Corinthian temple of the same materials. The remains of two artificial harbours, formed by long piers projecting into the sea, may still be traced.

At the head of the Gulf of Cos is Melasso, rather a considerable modern town, the residence of an aga, though ill built; but it is distinguished as occupying the site of Mylasa (*fig.* 563.), once a capital of Caria. The temples of this city were in ancient times so numerous, that a crier, entering the market-place, instead of the usual exclamation, "Hear, ye people!" called out, "Hear, ye temples!" They are now almost entirely demolished; and of one very fine portico, of the Composite order, which was found by Pococke, there remained, in Chandler's time, only the basement. The tombs are extremely numerous, and some

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Arch of Mylasa.

are of peculiar structure. About ten miles to the south-east, Eskihissar, a poor modern village, stands on the site of Stratonicea.

Lower down the same gulf, to many parts of which it gives its own name, is Boodroom, on the site of Halicarnassus (*fig.* 564.). It is still a considerable Turkish cruising port, with a modern castle and palace that possess strength and magnificence. There are no remains at all entire, except that of a theatre overhanging the town; but the attentive eye of the traveller soon discovers numerous fragments indicative of the former existence of a magnificent city. A traveller of the sixteenth century asserts that he saw some vestiges of the mausoleum of Artemisia; and the exquisite beauty of several of the fragments now transferred to modern buildings seems to characterize them as having belonged to some celebrated structure. Friezes inserted into the walls of the castle have been considered as specimens of sculpture equal to those of the Parthenon.

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Harbour of Halicarnassus.

Turning the head of the bay of Boodroom, we find on a smaller bay, Asyn Kalesi, the ancient Jassus, marked by many monuments, chiefly sepulchral. Across a broad neck of land, on the Latonian Gulf, travellers sought, but have scarcely found, the still more celebrated site of Miletus. On the opposite side of the same gulf is the village of Palatsha, the considerable ruins adjoining whose beautiful site have been supposed by Spon and others to be those of Miletus (*fig.* 565.); but a different opinion now prevails.

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Miletus.

We have reached the finest and most celebrated region of Asia Minor; at the mouth of the Meander, whose winding stream waters the most extended and fertile of all the vales of Ionia. At every step we ascend occur the remains of magnificent cities. Those of Magnesia, on the Meander, are usually supposed to be found at Guzelhissar, itself a large town, and the Turkish capital of this district. It is about four miles in circumference, built on a hill which commands an extensive and beautiful view over the valley of the Meander, reaching downward as far as the sea. Even the city itself, though composed of the usual Turkish materials, presents considerable beauty in its exterior aspect, containing numerous courts and gardens, filled with orange and cypress trees, whose foliage mingles with its lofty minarets; the streets are broader and better disposed than is usual in Turkey. Guzelhissar is the residence of a pacha, and carries on a great trade in cotton and cotton yarn, part of which is manufactured within itself into coarse calicoes. These circumstances make it the residence of many Jews, and other rich merchants, and one of the most considerable places in Asia Minor. The ruins are scattered in fragments, and in general only their foundations can be traced; but Pococke saw on the north side remains of a very splendid temple, which appeared likely to be the celebrated one of Diana Leucophryne. Mr. Leake, however, places the site of Magnesia twelve miles lower down the river, at a place called Juckbazar, where Van Egmont found a number of large ruins. He makes the Guzelhissar ruins to be those of Tralles, which have been usually referred to the village of Sultanhissar, fifteen miles higher up, but where Mr. Leake finds the remains of Nysa. On the opposite side of the river, near the village of Yeni Bazar, is found a magnificent palace and other remains of the ancient Alabanda. Near Yeni Shehr are those of Antioch on the Meander, in a neighbourhood still celebrated, as in ancient times, for the excellence of its figs. Considerably farther up, some miles from the left bank, is Degnizlei, which was a large town at the beginning of the last century, when 12,000 of its inhabitants were swallowed up by an earthquake: it has since become a very poor place. From this point, the lofty cliffs and snowy pinnacles of the great encircling range, called by the Turks Baba Dagh, the "father

of mountains," begin to appear; but the foreground beneath them consists of a tract crossed by low calcareous hills. Amid these are the majestic remains of Laodicea and of Hierapolis.

Laodicea is situated on a hill of dry, hard porous earth, which resounds under the feet; at the base of which flows the Lycus, a tributary of the Meander. It was founded by Antiochus, but did not rise to high importance until under the Roman empire, and about the Christian era. It presents, in shattered profusion, all the monuments which gave grandeur to a Grecian city; and its columns appear to have been formed of the most precious materials (*fig.* 566.). These remains cover the whole surface enclosed within the walls. At present

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Stadium at Laodicea.

the desertion is complete: there is neither house, church, nor mosque; a fox passing from behind a wall was found by Dr. Chandler the only inhabitant of Laodicea. On the opposite side, and nearer the Meander, is Hierapolis, whose mineral baths were formerly so celebrated. The mountain above it has been completely petrified by the streams flowing down its sides, which have given it, when seen from a distance, the appearance of chalk, and, on a nearer view, that of an immense frozen cascade. The incrustation is alkaline, without taste or smell, and effervesces with acids. The ruins are extensive; a very beautiful and perfect theatre, the marble seats of which are still standing; two large churches; and, as might be expected, most ample and magnificent baths, composed of marble, combined with the petrified substances, and formed above into huge vaults, the appearance of which is almost awful. The site of Colossæ appears to be in this neighbourhood, and has been fixed at a Turkish castle on a rock called Konous, which, however, presents no ruins of the requisite magnitude.

From the mouth of the Meander, the coast makes a large circuit, stretching out till only a narrow strait separates it from the island of Samos. This spot was the theatre of the celebrated naval action of Mycale, and has in our own times been distinguished by the exploits of the modern Greeks. The coast again bends inward, and we reach Scala Nova, a great modern Turkish sea-port, which carries on a considerable trade with Egypt and the neighbouring districts and islands. The population, prior to the late convulsions, was estimated at 1700 families, of whom more than a third were Greek. The site is that of Neapolis, and contains some ruins.

At a little distance from Scala Nova is the mouth of the Cayster, which waters another of the beautiful vales of this fine region. Though every way inferior to the Meander, it contains one almost unrivalled site—Ephesus. This city, once the pride of Asia, is now represented by Ayasaluk, a poor village, of a few cottages, fallen even from what it once was as a Mahometan town. This is attested by a large castle and mosque, containing beautiful stones enriched with the finest sculpture: the traveller soon discovers, however, that these are not Ephesus, but fragments taken from its ruins. At the distance of half a mile, the traces of the city may be clearly recognised. The stadium, now converted into a corn-field, the theatre, the odeon, and the gymnasium, (*fig.* 567.) may all be distinguished in outline, and their area is strewed with fine fragments. There is a particular part of the entablature of a Corinthian temple, delineated by M. Choiseul Gouffier, which, in the richness and variety of its ornaments, as well as their fine execution, has, perhaps, never been surpassed (*fig.* 568.) But it is not without difficulty, and even doubt, that he can determine the spot where stood that proud boast of antiquity, the temple sacred to Diana of the Ephesians. All that constituted the splendour of this edifice; its columns, of which 127 were the gifts of kings; its works of art, comprising the masterpieces of Apelles and Praxiteles, have disappeared. After the temple had been repeatedly pillaged by the barbarians, Justinian removed the columns

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Gymnasium at Ephesus.

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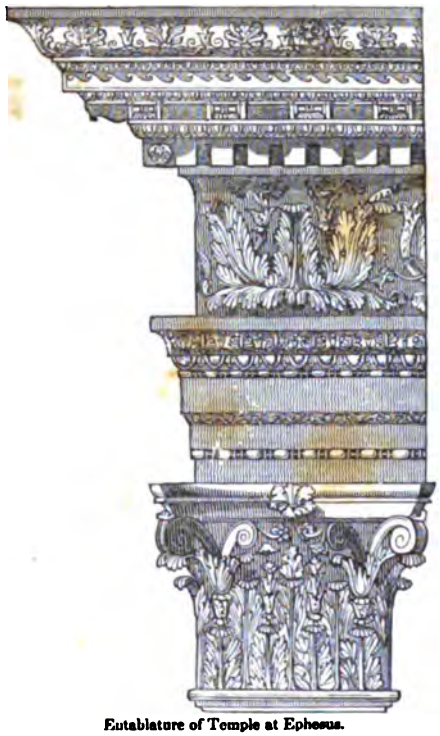

Entablature of Temple at Ephesus.

to adorn the church of St. Sophia at Constantinople. It can now be identified only by the marshy spot on which it was erected, and by the prodigious extent and magnitude of the arches raised above as a foundation. The vaults formed by them, compose a sort of labyrinth, and pure water is knee-deep underneath. There is not an apartment entire; but thick walls, shafts of columns, and fragments of every kind, are confusedly scattered.

The Upper Cayster presents, in its short course, no trace of any celebrated city. It has, however, on its southern bank, a modern town, bearing the remarkable name of Tyria or Tireh, but presenting no monuments to justify the inferences which might be drawn from so remarkable a name. It is large and well built, and from fourteen to twenty minarets, rising amid trees and surrounding gardens, give it a very beautiful appearance. Its flourishing state is due to its situation in the finest part of the vale of Cayster, which yields large crops of rice, and affords the richest pastures.

From the mouth of the Cayster, the coast sweeps out into an extended peninsula, which runs parallel to the island of Scio; after which it turns inward, and forms a side of that deep bay, at the head of which Smyrna is situated. This modern capital of Asia Minor, and emporium of the Levant, presents almost the only remnant of that prosperity which was once so widely diffused. The situation is such that Smyrna could scarcely fail to be a flourishing place. It has a fine bay, with good anchorage, a secure and capacious harbour, and behind, a plain watered by the Meles, which produces abundantly fruits and vegetables. Although Smyrna be not placed in any of the great western valleys, it is so near, and in so central a position with respect to them all, that it can easily draw from them every valuable product. With so advantageous a site, this city rose early to eminence. Its first boast was to have given birth to Homer, and it was received, though somewhat late into the Ionian confederacy. It was destroyed by the Lydians, but, having been rebuilt by Antigonus, rose then to its highest prosperity; so that Strabo pronounces it the most beautiful city of Asia. This praise it owed particularly to its gymnasium, its temple dedicated to Homer, and the general elegance and arrangement of its streets. Of the ancient edifices which stood on the hill above the city, only the ground plan can now be traced, the whole materials having been removed for the purpose of building the modern Smyrna, which extends along the bay four miles in length, and one in breadth. Its groves and minarets make a magnificent appearance from the sea; and the hill, though stripped of its classic edifices, has still a large Genoese castle on its summit. Within are gloomy walls, narrow and ill-paved streets; but the houses along the shore are very delightful, having gardens stretching down to the water, and summer-houses at their verge. The city is liable to earthquakes, which, unless in 1739, have caused more fear than injury; and, what is worse, the plague seldom allows a year to pass without committing serious ravages. The population has been estimated from 100,000 to 120,000, of whom 30,000 are supposed to be Greeks, and 8000 Armenians. Upwards of 2000 Europeans, chiefly French, are settled here for the Levant trade, and form a numerous society within themselves, which enlivens the gloom peculiar to a Turkish city. The exports of Smyrna are those of Asia Minor; raw silk, cotton, carpets, mohair, raisins, drugs, and a few precious stones. The returns are chiefly in wrought silk, woollens, tin, lead, and glass.

From Smyrna, after rounding a small promontory, we come to the mouth of the Hermus, the modern Sarabat, which watered one of the western valleys, rivalling in extent that of the Meander. At a considerable distance up, is another Magnesia, a celebrated ancient capital, which continues to be a large and populous town. Above rises a very lofty mountain, celebrated for the production of loadstone, whence the term magnet is supposed to be applied to that mineral. But the most remarkable place on the Hermus is that occupied by the ruins of Sardis, scattered over a verdant plain, near a miserable village, which yet retains the name of Sart. Of the Ionic temple of Cybele, the existing remains show that it was one of the

most stupendous of Grecian monuments, and the capitals of that order appeared to Mr. Cockerell the finest specimens he had anywhere seen. Some of the structures are of brick, and exhibit a striking proof of the durability which the ancients could bestow on that material. Five miles distant, near a small lake, is the tomb of Halyattes, celebrated by the ancients as a monument that might almost vie with those of Egypt or Babylon. This mound is a full quarter of a mile in circumference; but the rains have diminished its original altitude of 200 feet. We know not if Chandler has much ground for thinking that treasure would be found here, if any one would undertake the immense labour of digging.

We have still to survey the last and least of the Ionian valleys, that of Caicus. It presents the name and the site of Pergamos, once the capital of a powerful line of kings, and containing a library which ranked only second to that of Alexandria. The place still flourishes, and has a great population, stated perhaps, too high, at 15,000. The ruins have not been accurately observed. In a fine plain, on a tributary of the Caicus, is a tolerably large but poor town, called Akhissar, on the site of the ancient Thyatira, of which, however, no monuments are now left. About fifteen miles distant is Kirkagatch, a town said to contain 10,000 inhabitants.

From the mouth of the Caicus, the sinuosities of this coast form, with the opposite coast of Mitylene, a long succession of straits. On this part of Asia Minor lately rose Aivali or Cydonia. Half a century ago it was a poor village, when a Greek native, of the name of Economos, succeeded in obtaining from the Porte a firman, by which his countrymen on this spot enjoyed a protection, and even privileges, elsewhere denied. Under these immunities, and under the wise measures of Economos, who became the governor, Cydonia rose to be a sort of capital of the Greeks, and the centre of all the measures taken for their renovation as a people. A college was established there, which was soon crowded with youths ambitious to revive the ancient glory of the Grecian name. The adjacent country was brought into a state of high cultivation; large manufactories of oil and soap were established. In 1820, Cydonia was estimated to contain 35,000 inhabitants: the houses were well built of stone; though, from the neglect of forming an original plan, they were arranged without order, and without any preventive against the accumulation of filth. The population was entirely Greek, and formed a sort of independent republic, governed by its own magistrates, and paying merely a tribute to the Porte. Next year, on occasion of the general rising of the Greek nation, the Pacha of Brusa sent a body of troops to occupy the place; a step, which induced most of the inhabitants to abandon it, and seek shelter on the neighbouring islet of Mosconissi. A general descent being soon after made by the Greek fleet, the Turkish garrison was driven out; but, in retreating, they set fire to the city in more than twenty places; and the native population had scarcely time to make their escape, when it was reduced to a heap of ashes. No account has yet been received of its revival.

Passing round the Gulf of Adramyti, with a small town of the same name at its head, we enter on a scene less adorned by nature and art, but surpassing in fame any of the splendid regions already surveyed. This is the "campi ubi *Troja* fuit,"—an interesting and mysterious subject; on which, in recent times, volumes have been written. Such a controversy would evidently be far beyond our limits. It is soon obvious that all the grand outlines of nature, as delineated by Homer, remain unaltered. The island of Tenedos, the neighbouring straits of the Hellespont, the plain traversed by several small and rapid rivers; and, behind, the lofty summits of Ida and the rugged steeps of Gargarus—these still form the characteristic features of the Troad. The details are involved in much greater perplexity. Perhaps, in regard to these, Homer may have been less exact, and may have taken such liberties as suited the objects of his poem. In a plain often inundated, considerable changes of surface and boundary may probably have taken place; and the parties in the controversy have assumed the right of supposing such as might best accord with their hypotheses. The leading data given by Homer are, the Scamander rising almost under the walls of Troy, from two fountains, one hot, the other cold; the Simois afterwards flowing into it from the right; a plain between the Scamander and the Simois; and Troy from a height overlooking that plain. The actual features are, the Mendereh, a considerable mountain stream, which rises, however, as Dr. Clarke has shown, not near any possible site of Troy, but forty miles up the country, amid the heights of Ida. It receives, on the left, a rivulet from the height of Bonarbashi, the site of some hot springs, and several remarkable tombs; on the other, a small sluggish stream, called the Kallifat Osmack. A larger one, the Ghiumbrek, runs parallel to it on this side, but falls into the sea. The first hypothesis was that of Chevalier, according to whom Bonarbashi is the site of Troy, and the stream flowing from it the Scamander. He thus obtained for the site of the city a hill, the fountains, several large tumuli, and other ancient remains. Dr. Clarke, however, having clearly proved the Mendereh to be much the greater stream, and bearing still the ancient name, rejected the rivulet of Bonarbashi as unworthy of notice. The Simois appeared to him to be found in the Kallifat Osmack, which has a course of fifteen miles, and a tolerable body of water, but a slow current: floods, however, might render it "the rapid Simois." Between these rivers is the village of Tchiblak, which may, he conceives, have been the site of Troy. A late ingenious

writer has sought to fix the Simois in the Ghiumbrek, supposed then to have fallen into the Mendereh, though its course is now changed. The intervening plain would afford ample room for the contending armies, and such as no other hypothesis presents; while within its circuit is a spot ascertained by Dr. Clarke to be the New Ilium of Strabo, believed, in his time, though not by himself, to be the spot on which Troy stood. Mr. Leake, again, has revived the almost forgotten hypothesis of Chevalier. He imagines that the Bonarbashi, in consequence of coming from Troy, was honoured with the principal name, while the Mendereh, above the junction, was considered merely as a tributary. In its height, in the two fountains, and in every other particular, it will then correspond to the description of Homer.

Dr. Clarke scaled the heights of Ida, where he found the most rugged and romantic scenery, and obtained from its summit a splendid view over a great part of Asia Minor. In the interior, on a fine plain, he found the village of Aene, recalling the name of Æneas; and Beyramitch, a populous town, the modern capital of the Troad. Below, opposite to Tenedos, appear the remains of Alexandria Troas, built by Antigonus and Lysimachus in honour of Alexander. Even at the present time, when it has been robbed of most of its ornaments to enrich Constantinople, all the splendid appendages of a Greek city are traced on a great scale; Gymnasium (*fig.* 569.), acqueduct, theatre, baths, and a very fine building, erroneously called the palace of Priam, the marble of which appears to have been covered with a coating of metal.

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Gymnasium at Troas.

We now enter the narrow strait of the Hellespont (the modern Dardanelles), forming the entrance into the Propontis or Sea of Marmora. The passage is defended by two opposite forts, called the Castles of Asia; a little to the north of which are the remains of the ancient cities of Sestos and Abydos, rendered famous by the tragic loves of Hero and Leander.

As the Propontis approaches its eastern boundary, it shoots up the long and narrow Gulf of Moudania, about fifteen miles inland from which, to the south, is Boursa, or Brusa, the ancient Prusa, capital first of Bithynia, and afterwards, for a short time, of the Turkish empire, till the conquest of Constantinople, when the seat of government was transferred thither. Boursa is still a great and flourishing city, containing probably not fewer than 60,000 inhabitants. Its situation is noble, in a plain twenty miles in length, covered with magnificent forests, behind which, to the south, rise the snowy pinnacles of Olympus. The air is considered by Browne as very salubrious, with which quality, however, the ravages committed by the plague during Mr. Kinneir's residence seem ill to accord. The ancient structures have been entirely taken down, and reconstructed in the shape of modern mosques, which amount, it is said, to the number of 365, and some of them are very splendid. The ordinary houses are of wood; the streets very narrow, but clean; and Boursa is altogether a very fine Turkish city. Cloths are extensively manufactured out of the excellent silk and cotton produced in the neighbourhood; and a constant intercourse is carried on with Smyrna and Aleppo. These manufactures are chiefly in the hands of the Armenians, who inhabit the city to the number of 7090. Moudania, which is situated on the gulf of that name, and may be termed the sea-port of Boursa, is a town built of wood, inhabited chiefly by Greek sailors.

Only a few wretched cottages occupy the place of Nice, so celebrated under the Lower Empire, particularly for two great ecclesiastical councils. Those humble dwellings are beautifully situated in a fine plain bordered by the lake, and enclosed by wooded hills, rising into the lofty heights of Olympus. At the end of this plain the yet entire circuit of its walls, with their lofty towers and massy gates, make a most magnificent appearance. The interior, however, presents an entire contrast. A considerable Turkish town, bearing the name of Isnik, had been built out of the ancient city; but this too is now deserted, and nothing appears but ruin upon ruin. The decaying walls of the mosques and palaces are seen everywhere variegated with columns and other fragments of the more ancient edifices out of which they were constructed.

On turning the eastern boundary of the Sea of Marmora, we immediately descry another great fallen capital, Nicomedia, the modern Is-Nikmid. It was an early residence of the kings of Bithynia; but its highest greatness began under Diocletian, who made it the metropolis of the Roman empire, the wealth of which he lavished in raising it at once to a rivalry with Rome. In this character it was soon supplanted by Constantinople, and all its ornaments were probably carried off to embellish this new residence; for there does not now remain the vestige of an ancient city. Is-Nikmid, containing 700 families, has the appear-

auce of a town entirely modern. Similar has been the fate of Chalcedon, so distinguished in ecclesiastical history; its unoccupied area is covered with corn-fields and vineyards.

Scutari is referred to Constantinople, of which it forms entirely a suburb. Passing, therefore, the Bosphorus, or channel of Constantinople, we reach the Black Sea and the coast of the ancient Bithynia. It is described as a romantic and beautiful country, intersected with lofty mountains and fertile valleys; rich in fruits and wine, and abounding in noble forests. Through this region the Sakaria, the ancient Sangarius, after traversing a great extent of the high interior plains, rolls a full and rapid stream into the gulf of Erekli. A great part of its lower course is through a gloomy and intricate defile, bordered on each side by rugged perpendicular precipices. To the east of this river the country becomes very lofty, and presents an aspect like that of Sweden, being covered with noble pine trees, above which rise the snowy tops of the mountains. These rugged and gloomy tracts enclose a large plain, in the heart of which lies Boli, the ancient Hadrianopolis, now a poor town of about 1000 houses, and twelve mosques; noted for the mineral baths in its vicinity. Due north from Boli, at the foot of stupendous mountains, is the sea-port of Erekli (Heraclea), which still carries on some commerce, but retains nothing of the grandeur which it displayed under its original name.

Proceeding eastward, we enter the ancient Paphlagonia, an elevated, rude, and naked region, with detached cultivated spots, but chiefly occupied by the pastoral tribes. The commerce is carried on by Amasserah, formerly Amastris; by Gydros, once Cytorus; by Ineboli; Inichi; but above all by Sinope. This celebrated capital of Pontus, and emporium of the Euxine, though destitute of its former wealth and extensive fisheries, retains still a population of 5000 souls, carrying on an export trade in rice, fruits, and raw hides. Docks for the imperial navy are also maintained there, though no longer on a great scale. The modern metropolis of all this country, however, is Kostamboul, or Kastamouni, situated about thirty miles in the interior, in a bare dreary region, bounded on the south by the lofty ridges of Olgassus, one of the highest parts of the great encircling chain. It contains about 15,000 Turkish and 3000 Greek inhabitants, thirty mosques, and numerous baths. On a high perpendicular rock, in the centre, is a ruinous castle, that once belonged to the Comneni.

Eastward from Kostamboul the country rapidly improves, being watered, among other rivers, by the Kizil Irmak (Halys), which is the largest in Asia Minor, and traverses, by a circuitous line, nearly the entire breadth of the continent. On this route we pass Tash Kiupri, with 4000 families and thirteen mosques, situated in a rich valley, and carrying on some manufactures of leather and cotton. It is the ancient Pompeiopolis, and presents some beautiful remains of Greek architecture. Some of the pines in this neighbourhood measured sixteen feet in circumference, and were immensely high, well fitted to be "the mast of some great admiral;" but they are left to rot, neglected and useless. Here, also, is found Boiabad, a large beautiful village, in a narrow valley watered by a rivulet, and surrounded by hills and groves. Vizier Kiupri, beyond the Halys, situated in a rich pastoral district, has forty-six villages dependent on it, and contains 2000 inhabitants.

A route almost directly east, through a picturesque mountainous and woody country, leads to the shores of the Euxine, and to Samsoun, the ancient Amisus. This city, celebrated first as an independent Milesian colony, and afterwards as a residence of Mithridates and Pompey, has not now above 2000 Turkish inhabitants; but many of the adjacent villages are inhabited by Greeks, who carry on a brisk trade with Constantinople.

The ancient kingdom of Pontus, which we are now traversing, consists, in a great measure, of a very flat plain along the sea-shore, in many places highly cultivated; in others, the streams, unable to reach the sea, spread into swamps and morasses. About thirty miles east of Samsoun, the Yeshil Irmak, the ancient Iris, pours into the sea nearly as large a body of water as the Kizil Irmak, though after a much shorter course. A little beyond is the Thermodon, now called Termeh, only famous as the spot on which history or fable has placed the female warriors memorable under the name of Amazons. Farther on, a fine wooded ridge, which has formed a vast amphitheatre round the plain of Pontus, approaches the sea at Unieh, the ancient Ænos, a dirty wooden town, most beautifully situated, and carrying on a thriving trade in cotton stuffs, fruit, and wine from the interior. To the east, through a rugged and difficult country, is Keresoun, the ancient Cerasus, a town of 700 houses, with a ruinous aspect; and Tereboli (Tripolis), about half this size, but in better condition. At length we arrive at Trebisond, the ancient capital of the Comneni, and the chief emporium of this part of Asia Minor. Xenophon called it Trapezus, from the oblong form which it still retains. The houses are built of stone, but are as usual crowded and gloomy. The lofty ancient ramparts, also built of stone, extend along two deep ravines by which the city is defended; and considerable ruins show the site of the palace. The inhabitants are estimated at about 50,000, consisting of all the races that inhabit Turkey, mixed with the more varied tribes from the Caucasus. They carry on a considerable trade in fruit and wine, and in silk and cotton stuffs of their own manufacture.

The high and wide expanse of interior Asia Minor, the most extensive, though by no

means the finest or most productive portion, remains to be surveyed. The general character is that of a high bare table-land, begirt with lofty ridges of mountains. Being for the most part destitute of trees, it has a naked aspect. Though capable of successful cultivation, the indolence of the natives, and the insecurity of property, prevent the raising of any adequate supply of grain. On the banks of all the rivers, however, are rich pastures, which, with the open country in general, are occupied by the nomadic tribes called Turkmans, whose habits are almost wholly Tartar. They are subject to little princes, who, according to circumstances, do or do not pay a small tribute to the Porte; and, according to immemorial Scythian usage, combine their pastoral pursuits with that of plundering the unprotected traveller.

Interior Asia Minor may be divided, though without any precise demarcation, into two portions, western and eastern. The former comprises the wide range of the ancient Phrygia, with the smaller bordering districts of Galatia on the north and Lycaonia on the south. In modern times it is divided between Anatolia and Caramania, forming the interior of both. The eastern division consists of the ancient Cappadocia, now the pachalic of Sivas, or Sebaste, reaching almost to the Euphrates.

The western division contains several large cities. Kutaiah, reckoned its capital, is situated amid the mountains which give rise to the rivers of Ionia; and the whole country around forms the vast mass of those mountains. Even in its decay, the population, amounting to between 50,000 and 60,000, of whom 10,000 are Armenians, carry on a lucrative trade. The houses are large, built on the model of those of Constantinople; and the streets adorned with many handsome fountains. There are fifty mosques, thirty public baths for the use of the people; and twenty large khans for the reception of travellers. About fifty miles to the north is Eskishehr, situated on two rivers that fall into the Sakaria. Around it is an extensive arid plain, the same on which Sultan Soliman was defeated by Godfrey of Bouillon. It was the ancient Dorylæum, celebrated for its warm baths, of which an ancient one, adorned with columns of jasper, still remains: it is so hot as to be intolerable for more than two or three minutes. The modern town is of considerable extent, but the houses are poor and ruinous. On the other side, about sixty miles due south from Kutaiah, is Afium Karahissar, which D'Anville, on somewhat equivocal grounds, supposed to be the ancient Apamea.* It is placed at the western limit of the great chain of Taurus, called here Kalder Dag, and is a large city, containing about 12,000 families, almost entirely Turkish, who are extensively engaged in the manufacture of black felt, and the culture and preparation of opium; both of which form articles of export.

The great road through Asia Minor runs now in a direction nearly south-east towards the southern coast. On this route is Ak-shehr* (the white city), the ancient Antiochia ad Pisidiam, at the foot of Taurus, whence cold winds blow, and torrents rush down upon the city; yet it contains 1500 houses, is adorned with many beautiful gardens, and with a mosque and college consecrated to the memory of Bajazet. Farther on is Ladik, the ancient Laodicea Combusta; but this is now a poor mud village, presenting only some fragments of marble columns, which the Turks have converted into tombstones.

Proceeding on this route, and approaching the southern line of mountains, the traveller reaches Konieh, long one of the grand scenes of Turkish magnificence. It was Iconium, the capital of Lycaonia; but its splendour dates from the period when it became the residence of the powerful and warlike sultans of Roum; which it continued to be till that kingdom sunk beneath the arms of the Tartars. Konieh still displays superb specimens of all the edifices that constitute Turkish grandeur; mosques, colleges, baths, gradually crumbling into ruin. There are twelve large and above 100 small mosques: those of Sultan Selim and Sheik Ibrahim are spacious and magnificent structures; the marble gates also of the Capan Madressa and other old colleges, richly adorned with fretwork and entablature, afford some of the finest specimens extant of Moorish architecture. The ruins of the ancient Greek city, however, had contributed largely towards its ornament. Among these, Mr. Kinneir remarked a colossal statue of Hercules, which appeared to him fully equal to any ancient sculpture he had ever seen. The modern city, destitute of commerce, is built of wretched brick huts, and is not supposed to contain above 30,000 inhabitants.

Fifty miles from Konieh, about midway to the coast, is Caraman, or Karman, which, after the fall of Iconium, became the residence of a chief or sultan of its own name; who reigned over a great extent of the south of Asia Minor, which is still denominated Caramania. It is much inferior in magnificence to Konieh, but carries on a considerable manufacture of coarse blue cotton cloth, and drives a brisk trade with Taurus, Cæsarea, and Smyrna.

In the heart of Phrygia, and nearly in the centre of Asia Minor, is a considerable city, Angora, the ancient Ancyra, capital of Galatia. The surrounding pachalic consists of a vast plain, abounding in fruits and pasturage, but scantily supplied with grain. It is covered

*[Arundel has shown that the site of Apamea is to be found at Deenare; and that of Antioch at Yalobatz. The ruins at Akshehr are those of Philomelium.—AM. ED.]

with Turkmans, from whose roving hordes the Porte in vain endeavours to exact even any regular tribute. Their principal chief can muster, it is said, 30,000 horsemen under his banner. The most curious product of this region is the Angora goat, the hair of which rivals silk in fineness. This beautiful animal thrives only within a limited tract to the westward of the Halys, immediately beyond which it degenerates. The city crowns a range of small eminences, one of which, having on its summit the now ruinous castle, resembles the castle rock of Edinburgh, being perpendicular on three of its sides. The foundations and scattered fragments of great ancient edifices may still be traced, but nothing more. Pococke estimated the population at 100,000; Mr. Kinneir at only 20,000. Probably the actual decrease has been considerable; as the present pacha makes a monopoly of the grain, and in various ways oppresses the inhabitants. They still, however, carry on a manufacture of fine camlet, from the goats' hair produced in the neighbourhood.

The eastern interior of Asia Minor does not materially differ in its aspect from the western: it consists of wide plains, bare of trees and grain, but rich in pasturage. Subject to its roving tenants, the Turkmans, the frontier districts are also exposed to inroads from the Kurds, a fierce people, whom we shall find in their native seats on the upper Tigris. The people of Cappadocia were considered by the ancients as rude, stupid, and uninformed; but distinguished as rearing a breed of excellent horses: they still retain their reputation in both respects. In modern times this territory bore the name of Roum, or Rumyiah, being that given to the kingdom formed by the great Turkish dynasty of the Seljuks; and this name it retains, though the Porte ranks it as the pachalic of Sivas.

The city of Sivas, the ancient Sebaste, is a dirty, ill-built place; the inhabitants coarse and rude, without any other industry than the old Cappadocian occupation of rearing horses. The finest city in this part of Asia is Tokat, about forty miles to the north-west of Sivas, rising in the form of an amphitheatre round the banks of the Yeshil Irmak. Vessels of copper are here made to a great extent, from the mines in the neighbourhood; to which is added the manufacture of blue morocco and of silk stuffs. It is the great channel of the inland commerce of Asia Minor, communicating by caravans with Diarbekir and with Smyrna, and sending others to Boursa and Sinope. These resources support a population of 60,000, among whom, as in all the commercial cities, the Armenians form a large proportion. Proceeding seventy miles in the same direction, the traveller reaches Amasia, romantically situated on the banks of the same river, which here flows in a narrow valley enclosed between rocky mountains. The surrounding country is finely wooded, and produces excellent silk.

Changing our direction to the south-west, after a course of eighteen miles we arrive at Uskut or Ooscat, a city raised to celebrity in modern times by the residence of the powerful chief, Paswan Oglu. He long maintained an independent dominion over all the east of Asia Minor, which was greatly improved under his auspices. His palace occupied an immense space in the middle of the town; and though the exterior presented, as usual, only a mass of dead wall, the apartments were richly furnished, and profusely adorned with painting and gilding. The place was then supposed to contain 16,000 inhabitants, chiefly Turks; but since the death of this chief, and the fall of his house, it has probably sustained a considerable diminution. Nearly due south from Uskut, at the foot of the stupendous and snow-capped mountain of Argish, stands Kaissaria, capital of ancient Cappadocia, and called then Mazaca; but the name was changed to Cæsarea in honour of Tiberius. When sacked by Sapor, it was supposed to contain 400,000 souls. It still flourishes by the product and export of cotton, which occupies within a very narrow circuit a population of 25,000. [At the close of August, 1835, 2000 houses were destroyed by an earthquake, which injured, destroyed, or swallowed up, a great number of villages in the neighbourhood.—Am. Ed.] To the south-east is found Bostan, the ancient Comana, at the very head of the Kizil Irmak, in a finely watered plain covered with trees, and in high cultivation. It has 8000 or 9000 people, and forty flourishing villages under its jurisdiction. The vicinity forms one of the most agreeable spots in Asia, and affords a large quantity of wheat for exportation. To the south, in Upper Cilicia, below Mount Taurus, is Marash, capital of a small pachalic of the same name, which immediately borders on Syria.

To complete the picture of Asia Minor, we have still to survey its isles, once celebrated for wealth, beauty, and power, now reduced to a more complete state of desolation than even the continent. Cyprus, interposed between Syria and Phenicia, is the most extensive, and was in ancient times the most beautiful, as well as the most voluptuous. It is 140 miles in length, by 63 in breadth. The Cypriotes boast that the produce of every land and climate will flourish on their soil in the highest perfection. Its wheat is of superior quality, and notwithstanding the imperfect cultivation, a good deal is exported. Wine, however, may be considered as the staple product. The grapes contain the richest and most luscious juice of any in the world; and the wines made from them are peculiarly famed for their generous and restorative qualities. They resemble Tokay; but they are disliked by the English as having a sickly sweetness, which only great age can remove. Its fruits are also delicious, particularly the orange and apricot; and game is abundant. All these gifts of nature, how-

ever, are rendered abortive by the deplorable system under which the island is at present governed. The inhabitants, two-thirds of whom are Greeks, are considered just objects for oppression of every kind. The governor, who resides at Nicosia, is changed every year; and, having obtained his place by purchase, is impelled to indemnify and enrich himself by every form of extortion. Thus, Cyprus, from a fertile and populous island, has been reduced nearly to a desert, not containing more than 60,000 or 70,000 inhabitants, and even these are sensibly diminishing. Such was the case, even before the recent Greek insurrection had afforded the pretext for letting loose upon this unfortunate island a horde of banditti, who exercised on an unresisting people every form of plunder and cruelty. Till then, Cyprus retained still a remnant of what was rich and beautiful in its ancient aspect. Its females still display that finest model of the Grecian form and features, for which they were anciently celebrated. These charms they seek to heighten by artificial and often meretricious decoration; and their conduct often accords but too well with the ancient ideas, which represented Venus as born on this coast, and as choosing Paphos for her favourite shrine. They still carry on the staple Turkish manufactures of leather, carpets, and cotton; all of great excellence, the colours being particularly fine and durable.

Nicosia, chief of the cities of Cyprus, is situated in the centre of the island, in a noble plain, bounded by lofty mountains. Its fortifications appeared to Dr. Clarke the grandest he had ever seen; and their extent and solidity, with the domes and minarets rising amid the trees, give it an air of grandeur which, in Mr. Kinneir's apprehension, even Shiraz cannot rival. These fortifications are neglected, and indeed would not now be of much value, since the place is commanded by neighbouring hills. The church of St. Sophia, a very ancient Gothic structure, retains its magnificence; but the palace of Lusignan is almost entirely in ruin. The place contains about four thousand families, of whom half are Christian, divided between the Greek and Maronite churches. They carry on the three manufactures above mentioned, and are also engaged in the collection of medals and other antiquities, of which the neighbourhood is full. Larnica, on the southern coast, is the seat of Cypriote commerce, and the residence of the consuls from the different European powers. The ancient harbour is choked up; but the roadstead is good, and there is a considerable traffic carried on with Malta, Egypt, and Smyrna, by Levantine ships under English colours. The inhabitants amount to 3000, chiefly Greeks. A neighbouring cape, still called Chitti, exhibits the ruined fragments of the ancient Citium. Famagosta, the capital, held by the Venetians till it yielded to the arms of Selim, shows its former grandeur by a number of old churches, and by a handsome palace, now partly converted into a mosque. Cerina and Baffo (Paphos), though only villages, are the most agreeable parts of the island, particularly the latter, distinguished by ancient fable as the birthplace and residence of the goddess of love.

Another island, still more celebrated in antiquity, and still more completely fallen, is Rhodes. It was at an early period renowned as a commercial power; but its existence as a great republic commenced under the successors of Alexander. It then alone asserted that independence which had been lost by the other Grecian states; extended its commerce to the most distant regions; and rivalled the splendour and power of the greatest kings. Demetrius, the first captain of the age, not only exhausted against it all the ordinary resources of war, but invented the helepolis, an immense machine, to batter its formidable walls. He was completely baffled, and suffered before Rhodes the wreck of his military fortunes. Even when this island was merged in the Roman empire, her commercial code was adopted by that wise people; and she acquired in after-times a high military glory, when the knights of St. John, expelled from the Holy Land, made Rhodes one of their last retreats, where they long baffled the arms of Mahomet and Solyman. Of all these glories the Turkish sway has obliterated almost every vestige. The city of Rhodes presents no longer a fragment of its colossus, one of the wonders of the world, or any trace of the numerous fine edifices with which it had been adorned by the taste and wealth of its inhabitants. It exhibits only some massy Gothic churches converted into mosques; and contains within about a fourth of its former area a population of about 5000 Turks and 1000 Jews; for, in consequence, probably, of the jealousy inspired by its former obstinate resistance, no Christian is allowed to reside within the walls. The Greeks occupy, however, almost all the remainder of the island, but are not supposed to exceed 14,000 in number. Rhodes enjoys a delightful climate, the heats being cooled by the lofty mountain of Artemira, which rises in the centre, and is covered with those noble forests of pine, out of which the Rhodian navy was anciently constructed, and which are still conveyed in large quantities to the arsenals at Constantinople. The lower hills still produce a little of that wine, so much celebrated for its delicate perfume by the ancient writers. Industry and cultivation, however, are now nearly extinct, and Rhodes is obliged to import corn from Caramania.

Proceeding in our circuit of the coasts of Asia, we find Stanco, the ancient Cos, the birthplace of Hippocrates and Apelles, and producing, in abundance, that stone which serves as a whetstone; Stampalia, Amorgo, Patmos, where St. John wrote the Apocalypse. Samos, a larger and more important island, which gave birth to Pythagoras, has been always celebrated for its industry, of which striking antique vestiges remain. It has been lately dis-

tinguished for its brave stand in the cause of independence, and it is to be regretted that the European states, from local considerations, have assigned it to Turkey.

Scio has experienced a very different fate. Nature had rendered this spot almost a paradise. It is calculated by Mr. Turner, that among 150,000 inhabitants, there were not above 400 Turks. Scio had become a great centre of that intellectual regeneration at which the Greeks have lately aimed. A college had been established, to which resorted the youth of opulent families from every quarter of Greece, and which could number many eminent professors and scholars. All this prosperity and these fair prospects were in one day destroyed. A landing having been effected by part of the fleet from Hydra and Samos, the Sciotes made a general rising in the cause of liberty. Unfortunately, their habits had been those not only of peace, but of effeminacy; while their shores, unlike those of Samos, presented no barrier against invasion. They were unable, therefore, either to stop or resist the hordes of Asia, who poured across the narrow strait which separates Scio from the continent. The immediate consequence was, not a fight, but a dreadful and general massacre; the unfortunate Sciotes fleeing for shelter to the ships or to the rocky caves in the interior. Only a few escaped; 25,000 are supposed to have perished. For the survivors was reserved a fate, if possible, worse than death; the whole, including opulent citizens and ladies of high rank, being bound, and put on board the ships, to be sold as slaves in the markets of Smyrna; and Scio became at once a desert.

Mytilene, or Metelin, the ancient Lesbos, of voluptuous and poetic fame, the country of Sappho and Alcæus, in later times gave birth to that daring piratical chief Barbarossa. At present it is in great decay, though still supporting a population of 40,000, half of whom are Greeks. These it maintains by the trade in oil, of which are exported 50,000 quintals, not, however, of very superior quality. Tenedos is a small rocky island, chiefly memorable from the position in which it stands with regard to the plain of Troy. It derives also some maritime importance from its proximity to the entrance of the Dardanelles; and it produces a wine more highly esteemed than any other in the Archipelago.

Subsect. 4.—*Provinces on the Euphrates.*

The provinces on the Euphrates have been one of the least secure appendages of the Turkish empire. Besides forming a sort of debateable ground with Persia, and being beset on all sides by fierce and independent tribes, they have presented, in their remoteness and the difficulties of approach, a strong incentive for the usual ambition of the pachas to assume independent power. Although they possess a still greater name in history than the more western divisions, they do not attest it by the same magnificent monuments. No Greek or Roman kingdom ever possessed such a firm hold of this region as to rear on it structures marked by that high architecture and those durable materials which elsewhere excite the admiration of the world. The palaces of Nineveh, of Babylon, and of Bagdad, were composed of earth and brick, and have crumbled into dust. Nature, however, retains all her grandeur and original fertility, and presents her features of mountain, river, and plain, on a vaster scale, though not, perhaps, under such happy and beautiful combinations, as on the shores of Syria and Ionia.

We need scarcely name the great empires, which established their seat in the plain between the Tigris and the Euphrates. Nineveh, the earliest, and Babylon, perhaps the most splendid in history, erected here their vast capitals, and endeavoured to reduce the world to subjection. They did not, however, nearly equal the extent of that established by the caliphs of Bagdad, which during its brief existence connected the remotest extremities of Africa, Asia, and Europe. Internal dissension, and the tide of Turkish and Tartar invasion, had reduced it to a mere shadow, before Hulaku made himself master of Bagdad. This event extinguished the lustre of this region as a seat of empire and power, and converted it into a mere frontier and provincial district, in a great measure laid waste and neglected. It has since been viewed by the contending powers of Persia and Turkey rather as an outer bulwark of their respective dominions, than an integral or valuable portion of them.

In commencing our survey of this region, we shall begin at its summit,—Armenia. This is one of the most ancient kingdoms of Asia, and has almost always maintained a respectable and even independent rank. Though on the route, as it were, of all the great conquering potentates, its inaccessible site prevented it from being entirely absorbed by any one of them. They merely passed by, demanding tribute and military aid, and allowed it to be governed by its native kings. Only once, under Tigranes, Armenia came forward as a conquering power, and its career might have been prolonged, had it not encountered the disciplined legions of Rome, led by Lucullus and Pompey, who soon reduced it to the rank of their humblest tributaries. When Parthia set bounds, however, to the Roman arms, her rivalry enabled Armenia again to rear its head; and amid all the subsequent revolutions, it preserved a native government, until it was finally reduced into a pachalic by the Turkish power. A part, however, was severed, and appropriated by Persia.

Armenia, notwithstanding its fallen political situation, still encloses between its rugged mountains, cultivated valleys and even large cities. Erzeroum, which ranks as the capital,

is situated on one of its highest points. The climate in winter is intensely cold: snow begins to fall in August; and covers the ground from October to March. Erzeroum, however, is exceedingly healthful, and the country round it fertile; yet Major Sutherland has perhaps over-rated the population at 100,000, of which 15,000 are said to be Armenians, and the rest Turks. About eighteen miles distant is Hassan Kulaah, a small town defended by the strongest castle in Armenia. Kars, to the north, is a large town, fortified under Amurath III. and contiguous both to the Russian and Persian frontier; but the present pacha has attached himself in a great measure to the interest of the latter power. Akalzike, which touches on the frontier of Georgia, and Imiretta, stand on the Kur, in the midst of a fine arable district. The latter is an open populous town, of considerable trade.

Proceeding southwards along the foot of Ararat, we come to the fine city of Bayazid, the inhabitants of which are reported to be the most warlike and most learned of all the Armenians. It is adorned with a splendid and celebrated monastery, and is supposed to contain 30,000 souls. To the west is Van, noted as one of the bulwarks of the empire in its contests with Persia. Its situation is so strong as to be accessible only by a narrow passage, admitting two persons abreast; and it is carefully fortified, in the Oriental style, with a strong wall and a deep ditch. The surrounding country is equally beautiful and fertile; and at two miles' distance is the great lake bearing the same name, 168 miles in circumference, but the water of which is too brackish for use.

On a lower level than the region now described is the pachalic and territory of Diarbekir. It forms a high table-land, about 120 miles long, between the Euphrates and the Tigris. Its surface is rugged, but interspersed with numerous valleys, that are highly picturesque, beautiful, and fertile. The city of Diarbekir is the ancient Amida, a bulwark of the Eastern Empire against the Parthians. Its wall of black stone, the work of the Romans, though now neglected and ruinous, was considered by Mr. Kinneir as superior, for height and solidity, to any he had ever seen in Europe or Asia. This wall, with the towers, and the minarets peering above, gives to the city a peculiarly grand and imposing aspect. It contains 38,000 inhabitants, and from its situation on the high road between Persia and Turkey, as well as on the communication down the rivers, forms a sort of key to the commerce of Western Asia. On the northern extremity is Maden, a town situated in the very heart of Mount Taurus, and surrounded by lofty ridges of bleak and barren mountains, through a prodigious chasm in which the Tigris is seen dashing. These mountains, however, are rich in metallic wealth, from which Maden derives its importance. They produce abundance of excellent copper, some iron, and even a little gold and silver.

Crossing now to the eastern bank of the Tigris, we find ourselves in the rude and mountainous region of Koordistan, occupied by the proudest, fiercest, and most predatory race of all who infest the Turkish dominions. They inhabit castles rather than cities; but Betlis, on the northern frontier, forms a sort of capital. This city is built on a number of narrow ravines, branching out from a perpendicular rock in the centre, on which the castle is erected. The streets are steep, but the houses are well built of hewn stone, surrounded by gardens, and each so constructed as to form a sort of petty fortress. The city is well supplied with fruits and provisions; but few merchants venture on the perilous tracts which lead to and from this mountain capital. Although Betlis is nominally included in the pachalic of Moosh, the real power is possessed by the Khan of the Koords, the descendant of a long line of feudal princes. About fifty miles to the south is Sert, the ancient Tigranocerta, so named from Tigranes, who made it the capital of his short-lived empire. At present Sert is a large mountain village, where each house is a castle, surrounded by a wall, and even a moat. These chiefs resemble the ancient heads of the Scottish clans: they possess the power of life and death over their vassals, whom, however, they treat with kindness and familiarity, and are regarded with reverence and affection. They feel unbounded pride in their pedigree, which they trace back to the age of Noah, cherish a rooted attachment to their native soil, and a hatred of strangers, towards whom they observe neither faith nor humanity.

Immediately to the west of Betlis is Moosh, the town of which name has been made by the Turks the residence of a pacha. It is poor and ill-built; but the district contains many fertile spots and large villages, cultivated and inhabited by the industrious Armenians. To the south-west of Diarbekir, on the banks of the Upper Euphrates, is found the small pachalic of Orfa, marked by a gradual transition from the mountainous part of Armenia to the sands of the Syrian desert. Its capital occupies the site of the ancient Edessa, a city of some fame, both under the successors of Alexander, and afterwards when the arms of the crusaders placed over it one of the Courtenays, to whom it gave the title of *count*. It is said to be still well built, with a magnificent mosque consecrated to Abraham, and a population of 20,000 souls. A village inhabited by Arabs still bears the name and site of Harran, the original abode of the patriarch. Other places of some importance on the bank of the Euphrates are Racca, the ancient Nicephorium, a favourite residence of Haroun al Raschid; Bir, or Beer, where the passage of the river by the caravans is facilitated by a bridge of boats; Koum Kala, the ancient Zeugnia, a small castle and fort, formerly the great Roman military passage.

Descending from these heights, we come to the great plain between the two rivers called at present Algezira, and by the ancients Assyria and Mesopotamia. Though partly rocky and sandy, it is in general capable of being rendered productive; but being in many places occupied by the Arabs, and in others exposed to the inroads of the Kurds, less cultivation is bestowed upon it than on the mountain valleys to the north. Mousul or Mosul, the capital, is a large, ancient, gloomy-looking town, in a state of sensible decline. It contains about 35,000 inhabitants, with the remains of some fine Arabic structures; and carries on a little trade. On the opposite or eastern side of the Tigris, the village of Nunia appears to occupy a part of the vast circuit of the ancient Nineveh. The only monuments are mounds of earth, nearly a mile in circumference, similar to those of Babylon, though not nearly so lofty or so perfect. A rampart may still be traced some miles in circumference, surrounded by a fosse, and covered with grass, which gives it the appearance of one of the old Roman entrenchments. On a vast plain to the east was fought the battle of Arbela, in which the fate of the Persian empire was finally decided. Mosul, with a territory of two miles round it, has been formed into a pachalic by itself.

All the rest of this country is included in the pachalic of Bagdad, the upper part of which, touching on Diarbekir, retains still the mountainous character of that province. The most northern town is Merdin, the old Roman position of Mardis, the walls of which are still in tolerable repair. The houses, which are rather well built, rise in ranges above each other, along the declivity on which the city is built, and which forms a branch of the great chain of Mount Masius. About thirty miles to the south appear the towers and ramparts of Dara, the deep foundations of which may be traced for more than two miles. The southern gate is ten feet in thickness and sixty in height, and some fragments of ancient architecture are scattered over the site, which is now occupied only by a few detached families, attracted by the abundance of water. But of all this chain of mighty fortresses, none equalled the strength of Nisibis, which stood always impregnable against the Parthians, till it was ceded to them by treaty; after which the Romans attempted in vain to recover it. Only the foundations of the walls can be traced for about three miles. The interior is filled with hillocks of stone and rubbish, amid which appear the black tents of the Koords and Arabs. On the Euphrates, opposite to Mosul, are only a few small towns, on the site, however, of some Roman stations; among which we may remark Kerkesieh, the ancient Circesium, raised to importance by Diocletian; and Anna, a pretty large place, which, being situated at the point where the desert becomes of less immense breadth, is often a rendezvous of caravans coming up the river and proceeding across to Damascus.

Between Anna on one side, and the ruined fortress of Tekrit on the other, the rivers approach to within fifty, and sometimes twenty-five miles of each other, enclosing between them that magnificent plain called, successively, Babylon, Chaldea, Mesopotamia, and now Irak Arabi. As it is completely a flat surface, and the waters of the Tigris and Euphrates, during the wet season, rise to a level with it, the irrigation of the whole region is practicable, and during its prosperous era was completely effected. Hence arose an extensive and luxuriant fertility, which was rivalled only by the Delta of Egypt, and rendered it the early seat of wealth and civilisation. Even under Persian dominion a tribute was drawn from it equal to a third of that paid by all the rest of Asia. At present, the luxuriant harvests which once covered this plain have entirely failed, for want of the simple processes necessary to produce them. The inundated banks of the rivers are overgrown with impenetrable brushwood; the interior, deprived of the canals which formerly watered it, is reduced almost to the level of the bordering deserts. "The humble tent of the Arab now occupies the spot formerly adorned with the palaces of kings; and his flocks procure a scanty pittance of food, amid the fallen fragments of ancient magnificence."

Notwithstanding, however, the desolation to which this region is now consigned, the traveller still eagerly seeks in it the trace of those mighty capitals, which, both in the ancient and middle ages, gave to it a lustre unrivalled by any other part of the world. Of these, Bagdad alone retains any actual existence, and is still a large city, the metropolis of the extensive pachalic which bears its name. It exhibits, however, scarcely any remnant of the gay and romantic splendour of the court of the caliphs. Not even a vestige of their palace remains; and the same may be said of most of the costly edifices with which they embellished Bagdad, when it was the capital of the Mahometan world. The chief monuments of that period are the gates and towers, which, even in decay, far surpass any of modern erection. To these may be added the tomb of Zobeide, with one or two colleges and minarets. Almost all that is modern of Bagdad is mean, and foreign to the ideas which the name excites. The streets are so narrow that two horsemen can scarcely pass; and the bazaars, though containing accommodation for a very extensive trade, are by no means handsomely fitted up. Bagdad, since its capture by Hulaku, in 1258, which finally extinguished the caliphate, has passed through many vicissitudes. Being the greatest of the debateable subjects between the empires of Persia and Turkey, the most strenuous efforts of both were exerted for its possession.

From Bagdad, we proceed by a direct line almost due south to the Euphrates, in search

of Babylon, a spot to which recollection gives an almost unrivalled interest. Here, over a space extending five or six miles in every direction, are spread the undoubted remains of that ancient "glory of nations," which none of the proud capitals of the ancient world ever rivalled in magnitude and the grandeur of its structures; and which is rendered still more imposing by the awful antiquity to which its origin ascends. It owed its foundation, or at least its splendour, to Semiramis, whose era is that of the formation of the first of the great empires. Large additions were made, particularly by Nebuchadnezzar; and Babylon was thus the work of successive ages; but we have now no means of tracing the share taken by each in its erection and embellishment. The walls, according to Herodotus, were sixty miles in circumference, and, by the most moderate reports, at least forty-five. They were 365 feet high, and so broad that six chariots might drive abreast along the top. The form of the city was that of a regular square, with twenty-five gates on each side; and the streets ran in straight lines from gate to gate. Among the structures three were pre-eminent, and ranked among the wonders of the world. One was the palace, eight miles in circumference, enclosed within three successive walls, the interior of which was covered with paintings. Near it was the second wonder, that of the hanging gardens. These were raised, it is said, by Nebuchadnezzar, to gratify a Median spouse, accustomed to the bold scenery of her native country, and disgusted with the tame uniformity of the Babylonian plain. Having undertaken to transport thither the landscapes of her own land, he raised masses of huge extent, supported by arches upon arches, and covered with deep earth, which not only produced plants and flowers, but presented a range of wooded steeps, similar to those in the mountains of Media. Thirdly, the gigantic tower of Babel, or Belus, was a still more celebrated structure, respecting which tradition, fable, and history are strangely blended. Though dedicated by the Babylonian kings to an idolatrous worship, it traces its first origin to a much earlier period, when men, intoxicated by their first successful achievements, formed the daring project of an edifice reaching to the skies. Converted into the shrine of Belus, it was adorned by colossal images and statues of solid gold, the value of which has been rated by Herodotus, doubtless much too high, at 5000 talents, or 21,000,000*l.* sterling. Equally exaggerated has been its reputed height, which some Jewish authorities fix at twelve miles, and even Jerome quotes contemporary authority for its being four miles high. These ridiculous estimates give way before the sober testimony of Strabo, who states the height at a stadium, or 660 English feet, exceeding only a little that of the highest pyramid. Even after the downfall of Babylon as the capital of an empire, it continued to be the most splendid city in Asia. Alexander was strongly attached to it, and, if he had lived, would, perhaps, have made it his residence. The gradations of its utter decay are not distinctly traced by history. It seems to have been slow, as the powers which held sway in this neighbourhood chose other positions in the vicinity for their seats of empire. The kings of Syria chose Seleucia; the Parthians, Ctesiphon; the Saracens, Bagdad; and each, according to the custom of the East, sought to aggrandise his favourite city by transporting to it the inhabitants of Babylon, and the materials out of which it was built. Babylon is at present the scene of utter desolation:—"The wild beasts of the forest lie there; the dragons howl in her pleasant palaces." Yet even now, after so many ages of desolation, and after so many great capitals have been built out of its ruins, enough remains to attest the fidelity of those who described it as the greatest capital of the ancient world; "the glory of kingdoms, the beauty of the Chaldees' excellency." Its mighty structures, indeed, are resolved nearly into their original elements: instead of walls and towers, we see only confused heaps of earth, bricks, and rubbish; but these are piled almost in mountain masses; and, seen afar along the Mesopotamian plain, proclaim still the wonders of a distant age. Mr. Rich, in his careful survey, has described four remarkable masses, which cannot, however, without some difficulty, be traced to the ancient structures. The first is a large mound, called by the modern inhabitants the mound of Amran, 1100 yards in length, 800 in breadth, and from 50 to 60 feet in height. Its great extent and loose texture seem, with much probability, to suggest the idea of its being the remains of the hanging gardens. After crossing a valley somewhat more than a quarter of a mile in width, he came to another pile forming a square of about 700 yards, evidently the site of a finer and more elaborate structure. Several walls were entire, built of the finest brick, cemented with lime, ornamented with niches, and with some remains of painting and sculpture. The natives called it the *Kasr*, or palace, and its appearance seemed strongly to warrant that appellation. About a mile to the north is another, called the *Mujelibe*, whose sides are only 219 by 136 feet in length and breadth; but its elevation is 141 feet, greater than that of those just named. The summit is strewed with various fragments, and the interior contains many cavities, tenanted by wild beasts, bats, and owls. From two of them Mr. Rich extracted wooden coffins containing skeletons in high preservation; and he was of opinion that a considerable proportion of this structure would, upon search, be found similarly filled. These relics indicate a royal cemetery, of which several, particularly that of Ninus, are mentioned by historians. Mr. Rich, and some other travellers have considered it as the tower of Belus, or Babel. But there is another mass, of vaster dimensions, about ten miles distant, more strongly assimilating with the

aspect which we should conceive that famous structure to present. It is of an oblong form, 762 yards in circuit, and rises to the height of 192 feet. The bricks are of the finest description, and cemented with lime so closely, that it is nearly impossible to extract one entire. It has some appearance of having been built in stages, and on its summit there is a solid pile of brick thirty-seven feet high, diminishing in thickness to the top. In short, it is in all respects the greatest monument of Babylon, and would have unquestionably corresponded to the most remarkable edifice of that city but for its great distance from the other remains, which causes a doubt how it could have been comprehended even within the vast limits of Babylon. Yet, when we consider how immense these were, suggesting the idea of a fortified territory rather than that of a city, it seems scarcely sufficient to outweigh so striking an accordance in other respects, especially as there is no record of any such extraordinary structure situated without the walls of Babylon.

Adjoining to this remarkable scene is the modern town of Hillah, built on both sides of the Euphrates. It contains 12,000 inhabitants, has several stately caravanseras of Babylonian brick, well regulated markets, and carries on a considerable trade, both with Bassora and the districts higher up the river.

Returning to Bagdad, and proceeding down the Tigris, we find, about eighteen miles below, the ruins of two great capitals, which had been built out of those of Babylon: Ctesiphon, by the Persians, on the east side; and Seleucia, by the Syrian kings, on the west. Of Seleucia, only the walls and ramparts are now discoverable; but Ctesiphon still presents the outline of the Tauk Kesra, a palace of Chosroes, the richness and beauty of which have been a favourite theme of Oriental history and romance. It contains in the interior a vaulted hall, which rises to the height of 106 feet, and its lofty walls are seen from far along the plain.

The banks of the Tigris, down to its junction, cannot boast a single village; but to the west of the Euphrates, and even in the desert, occur several remarkable places. Meshed Ali was founded by Alexander; but its fame in the East rests on its being, as its name imports, the tomb of Ali, the great Mahometan prophet. This tomb forms a handsome structure in the centre of the city; and infidels are forbidden on pain of death to enter its walls. An elegant dome which surrounds it was gilded by order of Nadir Shah. It is supported by a constant influx of pilgrims, and by the number of Persians of rank, whose bodies are transported from the most distant quarters to be interred in this holy ground. Between Meshed Ali and the river is Koufa, a place of such antiquity, that from it the Arabic characters have been termed Koufic, or Cufic. It was enlarged by Omar, who made it the residence of the caliphs; but after the transference to Bagdad, it fell soon into decay. At present there remains little more than the mosque where Ali was assassinated; a plain building, which the Mahometans, however, hold in peculiar veneration. Both banks of the Euphrates are here possessed by Arab tribes, among whom the most powerful is that of Montefidge, which can bring four thousand horse into the field. Among them are some of the finest specimens of the Arabian breed.

The Euphrates and the Tigris, after having for so long a space enclosed this majestic plain in their parallel course, unite a little below the village of Corna. The combined stream receives the name of Shat-ul-Arab, and presents still some remnant of the fertility of the plain of Babylon, its banks abounding with grain, dates, and a variety of other fruits.

On this branch is situated Bassora, or Bussora, a great city, which absorbs nearly all the foreign commerce of Persia and the Euphrates. It is seven miles in circumference, a great part of which space is laid out in gardens and plantations; and intersected by canals navigable for small vessels. Its most important trade, being that with India, is carried on partly by British, but chiefly by Arabian vessels, of which those of 500 tons burden can ascend the river to this point. The inhabitants are estimated at 60,000; a heterogeneous mixture of Arabs, Turks, Indians, Persians, and all the people of the East. They have not expended much of their wealth in the embellishment of the city, which is dirty in the extreme. The houses are meanly built of brick; the bazaars are wholly unsuitable to the valuable merchandise deposited in them; and there is only one mosque which has a decent appearance.

CHAPTER III.

ARABIA.

Arabia forms an extensive country, or rather region of Asia. It is a peninsula comprising nearly the whole south-west portion of that great quarter of the globe.

Sect. I.—*General Outline and Aspect.*

The boundaries of Arabia are, on the west, the Red Sea, called also the Arabian Gulf, which separates it from the opposite coast of Africa, On the south it has the Indian Ocean,

part of which separates it from Berbera. As the coast changes its direction, it has still for some time this ocean on the east, opposite to the distant shores of Malabar: but this great sea is soon narrowed into the Persian Gulf, which divides Arabia from the south of Persia. A line drawn from the head of the Persian Gulf to the head of the Arabian Gulf would seem the natural boundary of Arabia, were it not for the vast desert which stretches to the northward, and is of a character so decidedly Arabian, that it has always been referred to that part of Asia. This wilderness forms a gulf, as it were, between two of the finest portions of the continent—Syria and Palestine, on the west; and the once great empires of Babylon and Assyria, now sunk into the Turkish pachalic of Bagdad, on the east. This tract of Arabia, continually narrowing to the northward, is finally closed at an angle, as it were, by the lofty mountain heads of the Euphrates and the Tigris.

The boundaries of this vast region are somewhat imperfectly defined, especially towards the north; but if we close it, as seems reasonable, about Palmyra and Anna, we shall then have a length from north to south of 22°, or somewhat more than 1500 miles. The greatest breadth across from Mecca is not less than 20°, or 1200 miles; but this is narrowed by the Persian Gulf to little more than half that dimension, and gradually diminishes to the northward. With these dimensions, under such a climate, and in a position so central, Arabia would have been the finest country of Asia, had it possessed one essential element, that of water. Deprived of this, it has, for the most part, ever borne the character of *desert*, for which its very name has become proverbial. There are, however, some brilliant exceptions, particularly the country of Yemen, which has been called the Happy Arabia; but in general, over all the vast expanse, naked rocks and arid sands predominate.

The privation of water, whence the barrenness of Arabia arises, is incident to all countries under the torrid zone in which moisture is not collected by great ranges of mountains. Lofty chains, like those of Ararat and Imaus, seem necessary to pour down those mighty streams that fertilise the burning plains of Asia. Arabia is not, indeed, destitute of tracts that have a mountainous character; but these present, in general, only long rocky ridges, whose scanty streams are quickly absorbed in the surrounding waste. Sinai and Horeb, towering over the head of the Red Sea, and rendered famous by great events, form, probably, the most elevated portion. In the Hedjaz, however, the country round Mecca and Medina, are found the Ramleah mountains, and other chains, whose aspect suggested to the ancients the name of the Stony Arabia. Another continuous chain of the same character appears to cross the whole of the Nedsjed, or central district. Between these stony ridges are interspersed what are called *wadis*, narrow watered valleys, which a degree of vegetation, sometimes even brilliant, distinguishes from the surrounding waste. Yemen, the Arabia Felix of the ancients, presents an aspect still more favourable. Along the whole of the Red Sea, indeed, extends a belt, called the Tehâma, of the most absolute and dreary barrenness. But behind this Yemen rises, not into the naked rocks of the interior, but into variegated hills, covered with some of the finest aromatic shrubs. Yet even this tract, though distinguished for beauty, is fertile by contrast, and cannot vie with the luxuriant plains of other Oriental countries.

In all Arabia scarcely a river can be said to exist. Torrents alone are seen dashing down the rocks; and after diffusing verdure over a valley of small extent, are absorbed in the sand. They seem never so copious as to form any thing that can properly be called a lake.

SECT. II.—*Natural Geography.*

SUBSECT. 1.—*Geology.*

The reader is referred to the remarks under Chap. I. Sect. II. p. 218.

SUBSECT. 2.—*Botany.*

The general nature of the vegetation of this country may be at once surmised from the name of its two great divisions, Arabia Petræa, and Arabia Deserta. A third portion is the Yemen, or Arabia Felix, so called on account of its comparative fertility. Another reason assigned for the name of *Happy* being given, is, that from this district were introduced, by way of Egypt, into Europe, so many precious spices, as spikenard, cinnamon, cassia, cardamoms, pepper, &c., which were supposed to be natives of the country, though the Arabs are now well known to have themselves imported them from the East Indies. Forskäl, however, who has published a flora of this particular district, tells us that an almost continual drought and a too serene sky grievously injure the soil, and render it unfit for cultivation. To this evil may be added whole armies of locusts ("the daughters of heat"), which everywhere devour the herbage; graminivorous birds, which are the pest of the corn-fields; and inundations of the sea, that impregnate the fields with salt, and destroy their fertility. Cryptogamic Plants are almost wholly wanting; the Grasses cannot bear a comparison with those of the north, and Junci and Carices are almost unknown. Littoral plants occupy the shore in a sandy or argillaceous soil. Campestral Plants (*Campestres*) abound more as you approach the mountains, and under the shade of trees, and exist in society. There are perennial pas-

tures, yielding Holcus and Panicum dichotomum. The Phaseolus is alone sown for fodder, as the Trifolium alexandrinum is in Egypt. The camel, when he enters the woods, luxuriates on Cucurbitaceous and Climbing Plants.

The Cerealia are not confined to the plains, but they extend to the mountains; art assisting nature in the formation of hanging gardens and fields, these being supported by walls and earth carried thither. Coffee, esculent plants, and the Cerealia, are planted, especially Wheat. These amphitheatres of fields, supplied with water by cisterns, afford an extraordinary and novel spectacle to the traveller. In the plains the Holcus Durra (*H. Sorghum*) is almost the only bread-corn cultivated. Of this there are three harvests in the year; two months and a half sufficing to bring the grain to maturity. The first crop is sowed by the natives, the two next spring up spontaneously; but the grain can only be secured by keeping up a constant noise, and a perpetual watch, to drive away the birds.

The forests are confined to the mountains and adjacent valleys. In all Tehâma (a district which occupies almost all the land between the mountains and the sea) there are none except at Surdud. These mountain-trees, though exposed to the most powerful winds, grow straight and lofty: they consist of various species of Fig, of which Forskål enumerates no less than eight; Sceura, Keura odorifera, a superb tree, like a palm, but without a spatha, much prized on account of the delicious odour it exhales, one spike alone sufficing to perfume a whole apartment for a long time, if placed in a rather moist situation; Tomex glabra; Cynanchium arboreum; Catha, a tree also cultivated in the gardens along with the Coffee, the Arabs eating the leaves on account of their many virtues: no plague can come near the dwelling where this is cultivated, nor any infectious disease attack a person who carries a branch of this tree in his bosom; and Mœrua, besides some unknown species. Palms inhabit the sandy plains of Tehâma.

The gardens of this country contain little more than esculent, odoriferous, and dyeing plants. Thus much M. Forskål.

Rather than attempt an account of the distribution of the vegetable productions of Arabia, of which so little is known, we shall content ourselves with noticing some few of the plants which are most valuable in the arts or in commerce, and in a greater or less degree peculiar to the country. And in the first rank will undoubtedly stand the

Coffee (*fig.* 570.), of which Arabia Felix, if not the native country, is the favoured spot where this shrub arrives at the greatest perfection. It is a production of the highest value. Some say it is a native of Upper Ethiopia, whence it was introduced to Arabia; others consider it an aboriginal of Yemen. Bruce maintains that it grows spontaneously in Abyssinia, being found wild in the greatest abundance from Caffa to the banks of the Nile. In that country, indeed, it has been considered to be cultivated from time immemorial; and the same author assures us that the Gailæ, a wandering tribe of Africans, in their incursions into Abyssinia, being obliged to traverse immense deserts, carry with them nothing to eat but coffee, roasted until it can be pulverised, and then mixed to a consistency that will permit its being rolled up in balls and put into a leathern bag. One of these, about the size of a billiard-ball, keeps them, they say, in strength and spirits during a whole day's fatigue, better than a loaf of bread or a meal of meat. Be this as it may, it is from Arabia that Europe first became acquainted with coffee; and it is from Arabia that the islands of the East and the islands of the West have derived it, where it is, perhaps, cultivated to a much greater extent than in Arabia itself. We can, at best, form but a very incorrect idea of the quantity of coffee grown, from that which is exported to Europe: for all Arabia yields to Europe annually only 1,500,000 lbs. weight; while St. Domingo has in one year exported 71,665,187 lbs., Surinam 15,387,000 lbs.; and other American islands, and even Persia, and Suez, have greatly exceeded in export the quantity derived from Arabia. The plant grows to the height of forty or fifty feet, with a stem four or five inches in diameter. Its copious evergreen foliage, white flowers, and red berries, are too well known in the stoves of our own country to need description.

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Coffee Plant.

The Mocha Coffee, as the seeds of the berry cultivated in Arabia are called, is distinguished from the coffee of other countries by the roundness and smallness of the grain; the reason for which is, that one out of the two seeds in the berry is abortive, and the other assumes a rounded form, for want of the mutual pressure that would otherwise have been given. The superior quality depends partly on the time and manner of gathering the Mocha coffee, and still more, perhaps, on the soil and site chosen for the cultivation of the plants. The best sort is grown on the mountains of Hadje, about sixteen miles east of Beit-el-fakieh, a spot, of which, besides an execrable plate, we have a description in the first volume of *Voyage en Arabie*, by Niebuhr. "My travelling companions," says he, "whom I had expected to find at Hadje, were in the gardens on the mountain where the coffee grows. I followed them thither the next day, taking a nearly east-south-east direction,

towards Kusma; and I overtook them at Bulgose, one of the villages which principally depend for subsistence on the culture of coffee. Neither asses nor mules can be used in climbing these mountains: it is necessary to ascend the steep places by a road, which, being only mended at wide intervals, is extremely bad. To me, however, who had just quitted the arid and sandy plains of Tehâma, where I had been accustomed to walking, it appeared delightful, as I was surrounded on all sides by gardens, which formed the principal plantations of coffee.

"It was only near Kahhme that I had seen a single small hill of those long and pentagonal stones that I have formerly described; but here a great portion of the mountain seemed to consist of this sort of stone; the detached rocks, likewise composed of it, presented a striking appearance, especially where water was trickling from the summit of the rocks, and formed cascades which appeared as if supported on little upright columns. It is easy to detach these stones from the rocks, and they are used to make steps on the road, as well as for the walls with which it is needful to prop up the gardens where the coffee is grown, on the slope of the mountains; from which it appears that these stones are very serviceable to the inhabitants of this hilly country.

"The tree that produces coffee is well known in Europe. It was covered with flowers near Bulgose, which diffused an agreeable scent. All the gardens are situated on platforms, one above another. Some are only watered by rain: in others there are large reservoirs (*Birket*) on the higher parts, whence the running water is conducted and distributed over all the beds, where the trees are generally grown so close together, that the sun cannot make its way between them. We were told that the trees, thus artificially irrigated, bore fruit twice a year: but that the beans ripened only once; those of the second crop, which did not attain to complete maturity, being inferior to the first."

Balsam, Frankincense, and Myrrh, Gum, Aloes, Senna, and Tamarinds, are other staple commodities of Arabia, that have given the country a name and a rank among commercial nations. The Balsam (*Amyris Opobalsamum* or *gileadensis*, perhaps both one and the other) has already been noticed when treating of Palestine; it being generally supposed to have been introduced from Arabia to Mount Gilead. Frankincense is the produce of Juniperus lycia (which, however, does not appear to be a native of Arabia),—and was extensively employed in their sacrifices by the Hebrews, who obtained the best from Arabia, as do the Roman Catholics at the present day for their incense. According to Niebuhr, the plant affording it is chiefly cultivated on the S.E. coast of Arabia, and is there called Liban or Oliban. Yet, on the authority of a paper in the *Asiatic Researches* by Mr. Colebrooke, the true Olibanum is the gum of an East Indian plant, the Boswellia serrata of Dr. Roxburgh; and the frankincense it yields was very likely to be imported by the Arabians, and thence sent to different countries.

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Acacia Arabica.

Myrrh is a gum-resin which is supposed to exude from the Amyris Kataf of Forskäl. Gum-arabic, as it is called, is produced by Acacia arabica (*fig.* 571.), (of which an excellent figure is given by Dr. Roxburgh,) and probably many other individuals of the same genus.

Of the Aloes, the Aloe officinalis of Forskäl is mentioned by that author as the species which affords the famous East Indian Aloes, called Soccotrine Aloes: the same, probably, as the Aloe Soccotrina (*fig.* 572.) of De Candolle, and a native of the island of Soccotra, at the mouth of the Red Sea. Perhaps the same species exists in Africa. In the presence of six species of this genus as mentioned by Forskäl, of several Stapelias, and some Mesembryanthema, Arabia has some affinity in its vegetation to that of the Cape of Good Hope.

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Aloe Soccotrina.

The Arabian physicians first made known the valuable properties of Senna as a medicine, and the Senna of Arabia is the foliage of Cassia lanceolata of Forskäl.

Tamarinds are the fruit of Tamarindus officinalis, a beautiful tree, now cultivated in all the hot parts of the world, on account of the valuable nature of the fruit.

The fruits of temperate and warmer climates are equally grown in Arabia. Gourds and Melons, Cocoa-nuts, Pomegranates, Dates, Apricots, Peaches, Almonds, Filberts, Pears, Figs, Oranges and Lemons, and even the Mangosteen.

SUBSECT. 2.—*Zoology.*

The Zoology of Arabia is nearly of a similar character to that of Northern Africa and

Caspian Russia; nor is it possible, with our present knowledge, to detect the slight variations in the productions of countries artificially separated by man. Arabia, in common with the whole extent of Northern Africa, Persia, and Western India, possesses the Camel and the Dromedary, to which travellers also add Lynxes, Jackals, Hyenas, Monkeys, Jerboas, and various Panthers. Information so desultory and vague is of little value, as leading to no correct knowledge of the particular species intended.

The Arabian horses (*fig.* 573.) are well known to be the finest in the world; but the idea that they are found wild in the deserts, as asserted by the old writers, is now justly exploded. Major Smith is of opinion that this noble animal was aboriginal in Great Tartary. In no country is he more esteemed, or are his faculties in consequence more developed, than in Arabia. The wandering Arab of the desert places his highest felicity in his horses, and is so attached to them, that they are more his companions than his servants. It is by these tribes that nearly all the horses are bred; and they are known under two denominations. *Kadeschi* are horses of an unknown race, and *kochlani*, those whose genealogy is known for 2000 years: this race, they assert, originated from the stalls of Solomon. To establish the genealogy of a kochlani, the most rigorous vigilance is employed, and such formalities and certificates required, as defeat all attempts at imposition. The horses of this noble race are sold at enormous prices, but no consideration whatever will induce the Arabs to part with the mares. An Arabian will generally carry his master from eighteen to twenty leagues in the day. They perspire little, and possess in the most eminent degree the qualities of endurance, vigour, and admirable temper.

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Arabian Horse.

Locusts in vast numbers, and of different species, periodically devastate this and the neighbouring regions of Africa, from whence they have emigrated, at distant intervals, to Sicily and the south-eastern shores of Europe.

Sect. III.—*Historical Geography.*

In taking a retrospective view of former periods of Arabian history, we find reason for surprise at the little change that has taken place in the social life and manners of the people. By the aid of scripture, we are enabled to ascend to a period long anterior to the commencement of ordinary record; and in the patriarchal ages, we find a mode of existence precisely similar to that of a modern Arabian sheik. In the Ishmaelites and Midianites, on the borders of the desert, we find the same combination of plunder and traffic which has ever since formed the occupation of their countrymen. The borders of the desert, however, where it merges into the fertile territory, became ultimately the seat of several demi-Arabian states, which attained to considerable power and even opulence. Foremost among these were Ammon, Moab, and Edom or Idumea; countries which, besides their other advantages, appear to have been enriched by a portion of the transit trade with India. The most brilliant and distinguished part of Arabia, however, was that designated "the Happy," and called Sabæa, and in scripture Sheba. Adding to its own productions the myrrh and balsams of the opposite coast of Berbera, it seems also to have been a depôt for the gold, spices, and other precious commodities of India and tropical Africa, which appear even to have been often considered by the ancients as its native products. The Arabs, indeed, of this and of the eastern coast of Oman appear to have always been the most active mercantile navigators of the Eastern seas.

Thus, during the whole of that long era which belongs to ancient history, Arabia preserved its interior pastoral state, while its relations with foreign nations were confined to commerce and to petty marauding. It also preserved its independence unaffected by those great events which changed the fate of the surrounding nations. It was not until the seventh century of the Christian era, that, after a singular revolution, it came forth with a mighty sweep to change the destinies of the world. The decline of the Roman empire, the corruption and distractions of the Eastern church, all favoured the impulse given by a fierce and warlike fanaticism.

Mahomet, after being for years an exile and a fugitive, at length succeeded in uniting under his standard all the nomadic and warlike tribes of central Arabia. In less than fifty years, that standard waved triumphant from the Straits of Gibraltar to the hitherto unconquered regions beyond the Oxus. Wherever it came, it stamped on mankind a new character,—dark, gloomy, severe,—combining a hard austerity with a voluptuous indulgence, and, except in some transient instances, hostile to all the improvements of art and science. The caliphs who first succeeded Mahomet, and ruled the most extensive empire on the globe, still retained the rude simplicity of the Arab pastoral life, with the ascetic self-denial of saints and religious teachers. The messenger who brought to Omar the tidings of the cap-

ture of Alexandria, found him sleeping among the beggars on the steps of the temple of Mecca. The wealth, however, which flowed in from every quarter, soon produced their usual effect of exciting a taste for pomp and pleasure. The court of the caliph acquired an almost magic splendour; while poetry and the sciences, regarded with contempt and horror by the earliest of these militant apostles, were raised to the highest pitch under the patronage of Haroun al Raschid and Almamoun. By that time, however, the rude rocks and desert sands of Arabia had ceased to be regarded as a fit residence for the opulent commanders of the faithful. They had transferred their residence to Bagdad, within the old and favourite seat of empire, on the rich Mesopotamian plain. Thus left to herself, Arabia seems to have resumed her natural and original character, even long before the court of Bagdad had been swept away by the torrent of Tartar invasion.

Arabia was thus again detached from other countries, and restored to her pristine state of rude and roving freedom. Her coast, however, suffered severely from the extended domination of the Turks, who two centuries ago had occupied its western ports as far as Mocha, and established a system destructive of the commercial prosperity which they had so long enjoyed. The decline of that empire, first felt in its extremities, enabled the Arabian sheiks to regain their independence.

A fresh fermentation, similar to the former, during the last century agitated the interior of Arabia. A prophet of obscure birth, Abdul Wahab, appeared, about 1720, and drew numerous followers. His first aim seems to have been to effect a reform in the Mahometan religion, to remove the traditions which had been grafted upon it, and to prevent divine honours from being paid to any human object, even to Mahomet. Ultimately, perhaps, he has only, by becoming a prophet himself, added one to its superstitions. He does not appear in the first instance to have contemplated the diffusion of his tenets by force. But Ibn Saoud or Sehoud, a young and warlike prince, inspired either by religious proselytism or political ambition, not only espoused the Wahabite tenets, but undertook, by the sword, to compel mankind to embrace them. Successively conquering and incorporating the little surrounding communities, he at length united under him all the warriors of the Nedsjed, the central and purest seat of the Arabian manners. He made himself master of the sacred cities of Mecca and Medina; and, extending his conquests, threatened at once Mocha, Cairo, and Damascus. Perhaps he and his successors might have established a new empire over the East, had they not been encountered by the kindred energies of Mohammed the Pacha of Egypt. That chief, directing with equal vigour more regular resources and more disciplined troops, proved an overmatch for the militant apostles of the desert. He drove them from Mecca and Medina, and obliged them to sign a humiliating treaty. Ibrahim, his son, pursued them down to Deraiye, the capital, which he took, making prisoner Abdallah, the son of Saoud, who was conveyed to Constantinople and put to death. A situation so remote, however, girt with so wide a circle of desert, rendered it impossible to extirpate the Wahabites, who watch, probably, a more favourable moment, if such should arise, for another invasion of the more favoured regions by which they are on every side surrounded.

SECT. IV.—*Political Geography.*

Arabia is, and has been from the earliest ages, ruled by a number of princes and petty lords, independent of each other, and exercising within their own territory a sort of supreme independent power founded on patriarchal principles. The sway of the father of a family, the first source of subordination among men, is that of which the influence is still most strongly felt among the Arabs. Each little community is considered as a family, the head of which exercises paternal authority over the rest. These, in the course of succession or migration, are split into several branches, that still form one tribe, without being dependent on each other; but their genealogies are carefully counted, and the representative of the senior branch is always regarded with a high degree of respect and deference. The republican form, which originated in the bosom of cities, has never been known or even attempted in Arabia; but a certain form of confederation is made by the election of a great sheik or "sheik of sheiks," who holds the supremacy. This dignity belongs to a certain family, but out of that family the election is made by the inferior sheiks, from general favour or the opinion of merit. This sway, however, can never be said to assume a feudal aspect, or enable him to summon the other chiefs as vassals. Each, entrenched in his rocky castle, or roaming with his camels and flocks over the expanse of the desert, holds himself independent of every other human power. Individual followers, however, are always ready to flock in considerable numbers to the standard of some successful warrior, who promises either daring adventure or rich booty. Hence it is no difficult matter to collect some thousands of freebooters, sufficient to lay under contribution all who pass by the route near which they hover. On that between Egypt and Palestine, the borders of Syria, and the tract along the Euphrates, large moving encampments continually pass to and fro, observing the progress of the traveller and the caravan, and ready to avail themselves of any favourable juncture. In the interior, among the Bedoween camps, this warlike temper vents itself in almost perpetual petty conflicts with each other. Twice only, men of powerful and aspiring genius have succeeded

in uniting together these multitudinous tribes, who then formed armies which the mightiest kingdoms of Asia attempted in vain to resist. These eruptions, however, were only transient, and even that of the followers of Mahomet, though it altered the aspect of the rest of the world, left Arabia itself almost wholly unchanged.

Yemen forms an exception to this proud and aristocratic independence of the Arabian tribes, in a district distinguished from all the rest by its populousness and fertility. The Imam of Sana, who succeeded to the government upon the expulsion of the Turks in 1630, has established a government formed strictly upon the model of the despotic kingdoms of Asia. He claims an authority both spiritual and temporal, demands from his subjects the most unqualified submission, and the extreme abuse of his power can only be checked by the desperate expedient of despotism and strangling. He governs the districts and towns by *dolas* and *sub-dolas*, raised usually from the lowest ranks, and the passive instruments of his will. Some traces yet remain of Arabian independence in the *cadis* and the college of justice, without whom no sentence of death can be pronounced. Though they are appointed and may be removed by the sovereign, this last prerogative is one which he seldom ventures to exercise, and their decisions are said to be often distinguished by a high degree of independence and integrity.

Sect. V.—*Productive Industry.*

The industry, wealth, and commerce of Arabia may be very briefly described.

We have already seen, that the general character of the soil of Arabia is, in a peculiar degree, arid and barren. In a great part of its surface no grain can be raised at all, and in others only that coarse kind of millet, called *d'hourra*, which is the general food of the inhabitants in dry tropical climates. The Arabs, notwithstanding their natural disadvantages and their wandering life, display in some quarters considerable industry in cultivation, particularly in turning to account the scanty rills with which their valleys are refreshed. In Yemen, the contrivances for this purpose are elaborate and extensive. Terraces are formed, and dikes constructed to retain the waters, which are also raised from wells by the labour of the hand to irrigate the fields; for the use of water-wheels, which answer this purpose with so much more ease and effect, has never been imported from Egypt. But the most interesting culture of these upland tracts consists in the coffee tree, which has now become a necessary of life over a great portion of the civilized globe. This plant grows at a considerable height, where it can be well watered and enjoy even a measure of coolness; to promote which, it is often fenced round with other trees. The coffee has been transplanted with success to other climates, particularly the Island of Bourbon and the West Indies, where most of that consumed in Britain is now grown. None, however, has ever rivalled in quality the coffee grown on its native hills. That of Bourbon ranks second, though still at a great distance. Its value here is derived from culture, for the wild coffee is altogether unpalatable. The date is extensively produced, and forms a great part of the food of the people. The balsam of Mecca, the most agreeable of all the odoriferous woods, is collected in the neighbourhood of that city, and thence transported to the different Eastern countries. In Yemen it is used only as a perfume, and in Egypt is burnt as firewood in cookery, for the sake of the agreeable odour which it communicates to the dishes. The incense and myrrh, for which southern Arabia is famous, are found there only in small quantities, and are chiefly brought from the opposite African coast.

If the vegetable culture of Arabia be thus scanty, its natives, a race wholly pastoral and wandering, have cultivated with care and success the breed of the nobler species of animals. The horse of Arabia, as to swiftness and beauty, enjoys a higher reputation than any other species in the world. This, as already observed, is maintained by an almost fantastic attention to their birth and training. The camel, which seems created expressly for the soft soil and thirsty plains of Arabia, is indigenous to that country, and seems to have been transported thence to the wide tracts, of similar character, which cover so great a part of northern Africa. Even the ass is here of a very superior breed, tall and handsome, generally preferred for travelling to those proud steeds which, reserved for state and for war, cannot be subjected to any species of drudgery.

Manufactures can scarcely be said to exist, with the exception of some quite common fabrics for domestic use. But for commerce Arabia enjoyed an early celebrity, of which only faint traces are now to be found. At all periods anterior to the discovery of the passage by the Cape of Good Hope, the greater part of the rich commodities of India were transported either up the Red Sea, or across Arabia from the Persian Gulf. The desert glittered with pearls and gems; and majestic cities, that lie now in ruins, arose amid the waste. Now that the whole of this trade has taken a different channel, the maritime commerce is almost wholly limited to the export of coffee, in exchange for the manufactures of Hindostan. This intercourse, after having been for a long time nearly engrossed by the English, when it centered in Bombay, has of late been appropriated by the active rivalry of the Americans, who, though they give a higher price for the commodity, bring it to Europe thirty per cent. cheaper. The entire quantity exported is now estimated at 16,000 bales,

of 305 lbs. each. Aden exports gum arabic, myrrh, and frankincense, chiefly brought, however, from Berbera. Besides this maritime trade, the pilgrimage to Mecca forms a commercial tie between the remotest extremities of the African and Asiatic continents; for the numerous devotees who, from every part of the Mahometan world, resort thither, scruple not to combine with their pious object a good deal of profane traffic, which is made at least to pay the expense of the journey.

SECT. VI.—*Civil and Social State.*

The social existence of the Arabs is, in one respect, remarkably interesting, as it presents, almost unaltered, an image of what human society was in the earliest ages. The whole going out and in of the patriarchs, their feelings and habits, as described in the book of Genesis, are found unchanged in the tent of the Arabian sheik. A recluse and monotonous life, in the midst of the desert, distance from great cities, and from all the scenes where rivalry and the eager pursuit of pleasure inspire the spirit of change, has left the veneration of ancestry, and the love of antique habits, to operate in full force.

The Arabs are of small size, spare, and even meagre. They are less distinguished by strength than by extreme agility. Few nations surpass them in horsemanship, and they are alike intrepid and skilful in the management of the bow, the javelin, and latterly of the musket, since its manifest superiority has introduced that weapon. Their complexion is sallow; a defect which some endeavour to cover by staining their whole body of a brownish yellow colour with the juice of the plant *henna*.

The Arabs are not only temperate, but extremely abstinent. Animal food is scarcely used at all: even among the rich there is little variety of vegetable diet; the milk of their camels, with its several preparations, particularly butter, is the only article with which they season their bread. Among the rich, this bread is composed of rice imported from abroad, and which they boil into pilau, and serve up in a large wooden plate; but the body of the nation are obliged to content themselves with such as can be made from the *d'hourra*. This abstemiousness, no doubt, arises chiefly from necessity; but the higher ranks seem also to value it as a means of preserving those habits of delicacy and cleanliness on which they pride themselves. Any of those symptoms of indigestion which excesses of the table are apt to produce, are marked by them with the deepest disgrace; and instances have been known of individuals who, in consequence of having so exposed themselves, have fled their country, never to return. Though coffee is little valued in its native district of Yemen, where they drink merely an infusion of the husks, it is the favourite liquor in eastern Arabia, and over the desert. They pound it in a mortar, which appeared to Niebuhr to preserve the flavour better than grinding it in a mill.

The dress of the Arabians is, in its outline, extremely simple, though set off, among the rich, with ornaments somewhat varied and fantastic. A piece of linen over the shoulder, another round the middle, a girdle, with a jambea knife, form the attire of ordinary Arabs during the day, and their bedclothes when asleep. Some wear only drawers and a shirt. Their sandals, sometimes of wood, cover merely the soles of the feet. The head-dress is the part on which they bestow a lavish profusion of covering and ornament, regardless of comfort, convenience, or any adaptation to the climate. Persons of fashion wear often as many as fifteen caps, piled one above another, and some of thick cloth. This mass is surmounted with one very splendid cap, embroidered with gold, and having always a sentence of the Koran worked into it. A muslin turban is then wrapped round the whole, the ends of which, flowing loosely upon the shoulders, are ornamented with gold and silver fringes.

The chiefs of the desert are deeply imbued with aristocratic feelings, and dwell on their high descent with a pride as lofty as ever prevailed in feudal Europe. This dignity is the more flattering, as it is not conferred or withdrawn at the will of any monarch. It is founded on ideas thoroughly rooted in the mind of the nation, who, like the Highland clans, view every sheik as the natural head of a race so ancient that its origin is traced back for thousands of years. A sheik of an ancient Arabian family would not exchange his title for that of sultan. Another hereditary Arabian dignity is that of *sheriffe*, or descendant of Mahomet, marked by the nearly exclusive privilege of wearing a green turban. This is a distinction of a different class, more widely diffused, and descending often to the poorest among the people. When the green turban is worn by the head of an ancient tribe, it denotes the highest dignity that can exist in Arabia. Such are the twelve families of the Koreish, who can establish by undoubted proof their descent from the immediate office-bearers under Mahomet. In general, however, the inhabitants of cities are viewed by the chiefs of the desert as a mixed and debased race, whom they scarcely own as belonging to the same nation with themselves.

The most prominent feature in the Arab character consists in the combination of hospitality and robbery, which are practised, the one most liberally and generously, the other in the most deliberate and merciless manner. It is towards strangers that these opposite dispositions are exercised; and the alternative of good or ill treatment often depends on very nice particulars. The rich traveller, who journeys in caravan over the open plain, is con-

sidered as a rightful prey; while he who approaches singly, in a defenceless state, and soliciting protection, acquires an irresistible claim to it. The being once admitted to partake common bread and salt is a sure pledge of safety and protection; and he who, by whatever means, has penetrated into the tent of the Arab, has reached a sanctuary. A change of circumstances often renders the same person an object of the most opposite feelings. He who, under the domestic roof, has experienced the most lavish kindness, may, if met on the open plain, be robbed and murdered; and he who, after being plundered of every thing, enters with confidence the tent of his enemy, will be commiserated, and his distress relieved. In the daily habits of life the generous feeling predominates. A Bedouin, as he sits down to his meal before the door, hesitates not to invite the passenger to share, without consideration that he himself is poor, and the provision scanty.

The right and practice of private vengeance, always prevalent among rude tribes and in irregular governments, is carried by the Arabs to the greatest height, and reduced to the most regular system. The fastidious pride of the high Bedouins lays them open to many fantastic wrongs unfelt by others. To say to such an one, "Thy bonnet is dirty," or, "The wrong side of thy turban is out," forms an insult which only blood can efface. Even for one to spit in the presence of another is deemed a provocation that calls for vengeance. In case of murder, the right and duty of inflicting punishment are supposed to devolve upon the friends of the deceased; and they seek to exercise it, not against the guilty individual, but against the head of the tribe, or at least the highest whom their swords can reach. Thus the distinguished Bedouins, especially when they visit the cities, must be armed at all points, and cannot for a moment sleep in security. This fierce pride, however, tolerates and admits a composition not very consistent with itself, which yet is not peculiar to the Arab. It is "the price of blood," upon the acceptance of which the deadly feud is appeased. Such a compensation, however, is of course considered as very little honourable, when compared with the exaction of the bloody vengeance for which it is substituted.

The Arab is ceremoniously and ostentatiously polite. When two Bedouins meet, they shake hands more than ten times, often with fantastic and peculiar ceremonies. The common salutation is "*Salâm aleïkûm!*" (peace be with you!) to which the aged commonly add their blessing. Coolness, command of temper, and a great exterior gravity, are considered as the only deportment becoming manhood, and are even affected by children at an early age. Although this studied decorum, and the habits of an ascetic religion, estrange them from every thing which in Europe is called gaiety, they are of a curious and social disposition. This they indulge by frequent resort to coffee-houses, the only public places known in the East: the markets, also, in which all business is transacted, are frequented, as affording opportunities of entering into social intercourse.

The right of polygamy, and the seclusion of the female sex, are established principles in Arabia, as in all Mahometan countries; but not to the same extent as among the great in Turkey and Persia. Niebuhr assures us, that the idea which has been held out, of the whole sex being for sale, and going off to the best bidder, is altogether chimerical. Only the poorest and least respectable submit their offspring to that degradation. Such, on the contrary, as are at all in easy circumstances, make it their ambition to provide a dowry for their daughters. Even in the rude tents of the desert, two apartments are provided, of which the inner is reserved for the females. Here, unless when the husband receives visits of ceremony, they go about almost as freely as European females. In the cities, on the contrary, they never appear in public without a veil, like that of the Egyptians, having only two holes for the eyes to peep through. It is a remark, that Arabian women often maintain great sway over their husbands, and even hold them in open subjection.

The religion of Mahomet, which originated in Arabia, still maintains undisputed sway; and Christians, who were once numerous, are now so completely extirpated, that Niebuhr could not hear of a single church existing. The Sunites and the Shiites, who divide between them the empires of Turkey and Persia, and wage such mortal hostility about they know not what, have also their respective districts in Arabia. The Sunites rank foremost, having always had in their possession the holy cities of Mecca and Medina. The Zeidites and the Beiari, two native sects, reign in the eastern territory of Oman. These, though they unite in acknowledging the authority of Mahomet and the Koran, have, like other religious sects, some differences, in virtue of which they account themselves the only acceptable worshippers, and all others as heretical and profane. A much more mild and tolerant spirit, however, animates the sects peculiar to Arabia, and is thence communicated to those of foreign origin. They are not affected by the same hostile feelings towards those of other religions, and are strangers to that furious spirit of proselytism which rages among Mahometans in general. Contempt towards foreign sects has with them three gradations: it falls lightest on the Christians; on the Jews next; and heaviest of all on the Banians. The Christians, when they appear in the character of merchants, the only capacity in which Europeans of any consideration usually resort to this country, experience little difference of treatment on account of their faith; and even the Banians, on the same footing, are allowed to settle, and carry on, in Oman, extensive traffic. Lately, the Wahabite sect, whose political influence

has already introduced them to our notice, had absorbed nearly the whole of central Arabia; but their contest with Mohammed Ali, and his triumphant success, have now reduced their influence to a very low ebb.

The Arabic, akin to the Hebrew and the Persian, ranks among the classic languages of the East. The distinguished works, however, which have raised it to this eminence, were produced out of the limits of Arabia, in the splendid courts founded by the Mahometan conquerors. Yet the spirit which breathes in them is still to a great extent Arabian. The perpetual movements among this multitude of little tribes, their wanderings, their feuds, their wars, the comparative estimation of the female sex, have generated a spirit of romance and adventure affording scope for the imagination. The tale, in listening to which the Asiatic, as he reclines at ease in the coffee-house, finds his most refined and animating amusement, seems to be the form of composition carried by their writers to the greatest perfection. The stories, indeed, so celebrated under the name of the *Thousand and one Nights*, were produced at Bagdad, under the brilliant reign of Haroun al Raschad. That work has, however, a basis of Arabian ideas mingled with those inspired by a splendid and mercantile capital. The romance of *Antar*, lately introduced to the English public, was produced within Arabia itself; and, though of ruder construction, and less suited to the general taste of mankind, is by no means destitute of poetical merit. The Arabians have still poets, who celebrate the exploits of their sheiks; but none of these can dispute the palm with the ancient bards of the nation. The works upon astronomy, history, geography, and medicine, by which Arabian writers have distinguished themselves, were produced at Bagdad, Fez, and Cordova; and these sciences, in Arabia itself, have always been and are in a very low condition. The first elements of knowledge, however, are pretty generally diffused. Schools are attached to every mosque; and there are others, by means of which many, even among the lowest of the people, learn to read and write. The schools are merely sheds, open toward the street, in which the scholars repeat their lessons aloud, undisturbed by what is going on without. Printing, however, has not made any progress; and the Arabs, who value themselves on an easy and flowing mode of writing, dislike the stiff appearance which their characters make when they issue from the presses of Europe.

SECT. VII.—*Local Geography.*

In making the circuit of Arabia, we shall begin with the region at the head of the Red Sea, one of the most desert tracts of this desert land; yet a celebrated and sacred spot, where rise the holy mounts of Horeb and Sinai. The wilderness in which they are situated is most gloomy, presenting long ranges of rugged and precipitous rocks, intersected by deep valleys, at the bottom of which are found the only traces of verdure. Sinai is ascended by a very steep route, which in many places is rendered practicable only by steps cut in the rock. The summit is marked both by a Christian church and a Mahometan mosque; and this combined veneration is further cherished by a pretended impression made in the rock by the foot of the camel on which Mahomet was conveyed up to heaven. Sinai can boast of two spacious convents erected on opposite sides of the mountain, for the reception of the numerous pilgrims by whom it was once visited. The largest, called the Monastery of the Forty Saints, is now entirely in the hands of the Arabs, who have driven out the monks, its former tenants. The convent of St. Catherine, however, is still supported by the contributions from the faithful of the East. It is really a handsome building, 120 feet long, having a church paved with marble, of which the altar is enriched with gold and jewels. At a little distance is an excellent garden, accessible from the convent by a subterraneous passage. This precaution is necessary, as the roving Arabs, who keep the place in constant blockade, are always on the watch to kill and carry off whatever they can. A little to the west of Sinai is Horeb, a mountain neither so lofty nor so rugged, but containing on its top some springs and verdure.

Proceeding south-east, along the Red Sea, we come to the Hedjaz, or Stony Arabia, a region sacred over the East, as the birth-place of Mahometan superstition. It consists of a sandy and barren plain, behind which, in the interior, rise chains of mountains, rugged indeed, but yielding some valuable products, especially the balm of Mecca. Amid these mountains are situated the metropolitan cities of Hedjaz and of Arabia, the holy cities of Mecca and Medina. An awful prohibition against any infidel foot which should attempt to approach these sacred spots rendered them almost unknown ground until very recently, when the daring curiosity of European adventurers triumphed over every obstacle. Mecca (*fig.* 574.) was then found to be a considerable city, one of the handsomest in the East. It stands in a narrow valley, enclosed between rocky hills, following their sinuosities, and partly built on their declivities: the fronts of the houses, instead of presenting, as in some Eastern

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Mecca.

cities, a long range of dead earthen wall, are of stone, raised to the height of three or four stories, and ornamented with columns and architectural ornaments. This gay aspect seems assumed in a great measure to attract pilgrims as lodgers, and with the same view the apartments are made neat and commodious. The resort of devotees of so many nations, from the extremities of Tartary to the banks of the Senegal, rendered Mecca, in peaceful times, a very flourishing city; and it has been supposed, probably with exaggeration, to contain 100,000 inhabitants. Burckhardt reckons now only 30,000. The Wahabite war, from which it suffered deeply, rendered the avenues to it no longer secure, especially as the Wahabites, though they themselves reverenced the holy places, shut them against the approach of those whom they deemed heretics; but since they came into the possession of Mohammed Ali, they have been thrown open to the Mahometan world. The temple of Mecca forms a very spacious square, about a quarter of a mile in each direction, with a triple or quadruple row of columns. A number of steps lead down into the interior, containing the object sacred to a Mahometan eye, the Kaaba, or house of the prophet, and within it the black stone, brought down by the angel Gabriel to form its foundation. To kiss this sacred stone, to go round it seven times, reciting appropriate hymns, form the completion of that religious service for which thousands of miles have been travelled. The last ceremonial is ablution in the well of Zemzem, which, though itself not the purest water, is supposed to cleanse the votary from all sin. A pilgrimage, often tumultuary, to Mount Arafat, completes the round of religious observance. A very active commerce in Mecca is combined with pilgrimage, consisting in the exchange of the richest commodities from the most industrious countries of the Mahometan world. Mecca, till it was conquered, first by the Wahabites, and then by the Pacha of Egypt, was almost a free city under its own sheriffe. The Meccaways are proud, gay, and somewhat dissolute; they are enabled to live in pomp by the gifts and sums paid for lodging and attendance by the numerous pilgrims.

Medina, notwithstanding its high claims as the burial-place of Mahomet, has never rivalled Mecca in the veneration of the East. To visit it is not even considered as an indispensable duty, and is little practised, unless by the Turkish pilgrims, in whose route it lies. Hence Medina contains not more than 500 houses, few of which show any degree of elegance or splendour. The great mosque, however, which encloses the tomb, is described as very splendid, being surrounded by numerous pillars of marble, jasper, and porphyry, on which letters of gold are in many places inscribed. The tomb itself is rather remarkably plain, conformably to the simplicity still affected in the age of Mahomet; and on each side of it are those of the two early caliphs, Abu Beker and Amar.

Of the ports along this coast, Tor, once an extensive seat of the commerce with India, now scarcely exists. Its harbour is still good, and in its vicinity are several populous villages. Yembo, the port of Medina, is of moderate size, like the city to which it is subservient; yet has a population of 5000 or 6000. Jedda belongs to Mecca, and is the main emporium of the Hedjaz. It is mainly supported by the caravans which, from motives of religion, trade, or both combined, come across from Suakin to Mecca. This route is followed by almost all pilgrims from the interior and centre of Africa, while those from Barbary take the way of Egypt. Jedda serves in a great measure as the port of Egypt as well as of Mecca. The annual Indian fleets here unload their cargoes, which are transported by the merchants of the place to Suez and Cairo. Jedda has thus a population of 12,000 or 15,000 inhabitants, and Burckhardt understood it to contain individual merchants worth nearly 200,000*l*. The town is neatly built of madrepores, and is, on the whole, a flourishing place. The entrance is obstructed by dangerous shoals, but upon a signal given, pilots hasten out, and guide the vessels through all those perils.

After a protracted voyage along a dreary coast, the navigator at length reaches the celebrated shores of Yemen, or the Happy Arabia. It does not, however, at once present that smiling aspect, nor waft those gales of perfume, which have been described by the fancy of the poets. A belt of flat, sandy, barren territory still forms the immediate border of the sea; and the traveller must penetrate a considerable distance into the interior before he reaches those fertile valleys, and those hills richly crowned with aromatic shrubs, for which Yemen is famed. This, like other fertile countries, has been subjected to a despotic yoke; the government being exercised by the Imam, in the capacity of priest or servant of Mahomet. He maintains an army of 4000 foot and 1000 horse; but his revenue is not supposed to exceed 80,000*l*., produced chiefly by duties on the export of coffee. His power, as already observed, is considerably checked by some controlling bodies; and the Djebal, or mountainous district, contains many little tribes by whom it is set at open defiance.

Yemen contains some considerable cities. Sana, the capital, is one of the neatest in the East. It is built of brick and stone, and contains several handsome mosques and palaces, as well as spacious caravanseras for the reception of travellers. The vicinity abounds with fruits, but scarcely affords wood sufficient for fuel. Taas is another city, about half the size

of Sana, surrounded by a mountainous territory, supposed to be the richest in the world in botanical productions.

It is by its ports, however, that Yemen is best known. Loheia, the most northerly, though situated in a poor country, with a shallow harbour, and bad water, exports a good deal of coffee, but of secondary quality. A better sort is found at Hodeida, to which has been transferred the trade of the once flourishing port of Ghalefka, now entirely choked up with sand. All these are secondary to Mocha, (*fig.* 575.), the chief mart for coffee, and superior to all others on the Arabian Gulf. It has declined, however, very considerably from the period when that favourite beverage could be procured only on the hills of Yemen; but now that the maritime nations of Europe derive their supply chiefly from their own colonies, recourse is had to Mocha only for some of very superior quality. It is situated on a flat sandy plain, over which hot winds continually blow. From the sea, its whitewashed houses, variegated by handsome minarets and tombs, make a pleasing appearance. On entering it, however, the filth of its streets, and the decayed appearance of many of the walls, built only of unburnt brick, produce a much less favourable impression. The population is not supposed by Lord Valentia to exceed 5000; and the trade is chiefly conducted by about 250 Banians and Gentoos. Moosa (*fig.* 576.), in its vicinity, the ancient emporium of Yemen, though now decayed, presents still a noble appearance. Beyond the straits is Aden, also a famous port, usually considered part of Yemen, but recently erected into a separate kingdom. Its commerce rests upon the export of myrrh, frankincense, and balsams, drawn in small quantities from Arabia itself, but largely from the opposite African coast of Berbera.

575

Mocha.

576

Moosa.

The coast of Arabia, where it ceases to be parallel to that of Africa, and faces only the expanse of the Indian Ocean, is called Hadramaut. A great portion of it is barren and dreary, and the interior, called Mahrah, forms a most extensive desert; but there are tracts interspersed with hills which almost rival Yemen in their smiling fertility. They produce few commodities, however, that are fitted for export; and the ports of Macula, Curiamuria, Morebat, and some others, are visited by foreign vessels chiefly for the purpose of obtaining water and refreshments.

The coast of Arabia, after extending north-east more than 1000 miles facing the ocean, and passing Ras Masera, changes its line to the north-west, and runs parallel to southern Persia. From this point to the entrance of the Persian Gulf is the coast of Oman, or Ommon. Though not the most celebrated, this appears to be the most flourishing and prosperous part of the whole Arabian peninsula. It is destitute, indeed, of the aromatics of Yemen; but its rich soil produces in abundance grain, fruits, and dates. Muscat, the capital, was taken by Albuquerque in 1507, and remained subject to the Portuguese until 1648, when they were driven out by an insurrection of the natives. It is now governed, like Yemen, by an Imam, or spiritual chief, who seems to exercise his power much for the benefit of his people. The government of the Imam is the most tranquil and protecting of any in the maritime parts either of Persia or Arabia. [The Imam, who is the most powerful and intelligent prince in these regions, has some large ships of war, and his subjects possess some of the finest trading vessels met with in the Indian Seas. A treaty of commerce, between him and the United States, was concluded in 1835.—AM. ED.] Muscat is frequented as a sort of general depôt for the merchandise of Persia, India, and Arabia, which, from the excellent police, lies open and unguarded in the streets, without danger of depredation. All the ports upon this coast are tributary to the Imam, and he has subjected Socotra, Brava, Zanzibar, and other important points on the eastern coast of Africa. He also holds the islands of Kishma and Ormuz in the Persian Gulf, and a considerable extent of the Persian coast, around Gombroon. A considerable trade is also carried on by caravans with the interior. High rocks on one side, and the island of Muscat on the other, form a spacious secure harbour, which cannot

indeed be entered without certain precautions; but on a signal made, excellent pilots immediately come out. The town is surrounded by a strong wall, within whose precincts only Arabs and Banians are allowed to reside: all strangers must remain in mat-houses without the gates. The population is stated by Mr. Buckingham at about 10,000, but others rate it much higher. About 100 miles to the south-west, near the mouth of a small river, is Sohar, anciently celebrated as the capital of eastern Arabia, but now much declined, its greatness being completely eclipsed by Muscat.

Cape Mussendoon, a bold and deeply indented promontory, forms the termination of a long rocky peninsula, and shuts in, upon the eastern side, the entrance of the Persian Gulf. This peninsular tract is inhabited by a mixed race of Arabs and Portuguese. As we proceed up the shores of the gulf, we find it in possession of a bold and desperate race, the Joasmi Arabs. Placed on the maritime route by which all the commerce between Persia and India must pass, they have availed themselves of this position to carry on a most outrageous system of piracy, accompanied with every circumstance of deliberate cruelty. These proceedings roused the indignation of Britain, who felt herself called upon, as the chief maritime power in these seas, to put down this destructive scourge. The first expedition, though successful, being insufficient to prevent a recurrence of the evil, another was undertaken some years ago, in which the main hold of the pirates, Ras el Khyma, was taken and completely destroyed, and their power so broken, that it is expected they will no longer interrupt the tranquillity of the Persian seas.

Continuing to ascend the gulf, the next district is that of Lahsa, or Lasha, inhabited by the powerful and wide-spread tribe of Beni Khaled, and forming the eastern termination of the great mountainous interior tract of the Nedsjed. It is well watered, and traversed by one of the chief of the small rivers of Arabia, called the Aftan. Lahsa, the capital, near the mouth of this river, is described as a considerable city; and Katif, built of rock salt, carries on some trade. Opposite to it is the island of Taroot, seven miles long, and covered with delightful gardens. But the most interesting object on this coast is the large island of Bahrein, near which is a bank producing the finest pearls in the world. They are procured by divers, who, descending to the bottom, cut the long thin fibre by which the muscle containing the pearl is attached to the ground. The commerce in this product has given rise to the town of Medina, of 800 or 900 houses, which, though its harbour can receive only vessels of 200 tons, carries on a good deal of intercourse with Bassora; and the rest of the island is covered with gardens and villages.

We have now completed the survey of the coasts of Arabia: the interior is too little known to call forth much observation. The southern part presents, on our maps, almost an entire blank; generally understood to consist of desert, though, doubtless, a closer observation would bring to view many fertile spots. The centre from Mecca to Lahsa is crossed by the mountainous tract called the Nedsjed, which, according to credible information, contains fertile valleys, a considerable population, and even towns of some magnitude. It carries on also some inland trade, and is traversed by caravan routes in several directions, but has not been illustrated with any precise or authentic details. This region, however, is now the most important of all Arabia, since it contains the seat and origin of the Wahabite power; and the numerous hosts which have issued from it under the standard of that power afford a clear proof that it is not throughout a desert. In its eastern quarter is Deraiye, the Wahabite capital, lately taken and demolished by the Pacha of Egypt, but which, being too distant to be permanently held by him, will probably resume its importance. More in the centre is the city of Yemama, noted as the birth-place of Mosellama, the most celebrated of the Arabian prophets before Mahomet.

The remainder of Arabia consists of that outer portion which, in the form of a triangle, extends along the borders of Palestine, Syria, and the course of the Euphrates. In its central part, this is the most completely desert tract of all Arabia, presenting nowhere any vestige of culture or fixed habitations, and traversed only by tribes shifting as the sand of the soil on which they tread. In approaching Syria and Judea, the desert insensibly loses its character, and passes into the fine soil of those fortunate regions. The districts, however, which have succeeded to the powerful semi-Arabian states of Moab and Ammon, are, according to modern geography, annexed to Syria and Palestine, and nothing is left to Arabia but complete desert. Even Palmyra, with its surrounding wastes, is considered as Syrian. On the south the ancient Edom, or Idumea, contains some well-watered valleys, and presents monuments of the power and commerce for which it was anciently celebrated. The ruins of its capital, Petra, lately discovered by Burckhardt, display considerable magnificence. He found 250 tombs cut in the rock. The monuments were partly of Greek and partly of Egyptian architecture. Along the Euphrates, the desert and the river touch immediately on each other. Its banks form necessarily a great and crowded caravan route, and there the plundering tribes expect their richest harvest. They are found, accordingly, in large bodies, and of the most hardy and desperate character. A number, availing themselves of the decayed state into which the Turkish government has sunk, have penetrated

into the rich Mesopotamian plain, between the Euphrates and the Tigris, where they feed their flocks, set the government at defiance, and, tempted by the exuberant fertility of the soil, have, in many instances, gradually acquired industrious and agricultural habits.

CHAPTER IV.

PERSIAN EMPIRE.

PERSIA, in the earliest times, was the seat of one of the most powerful Asiatic monarchies, connecting Eastern with Western Asia, and, in later ages, acted with energy on the political system of Europe. Although abridged of its ancient greatness, it still presents many interesting features.

SECT. I.—*General Outline and Aspect.*

There is no country whose boundaries are more difficult to define than those of Persia. It has none decidedly formed by nature, and is surrounded on every side by disputed provinces, whose lot depends on the varying fortune of arms, and on those frequent revolutions to which Oriental empire is liable. Long usage has made the Indus be looked upon, in Europe, as the eastern boundary of Persia; but the recent observations of Elphinstone, Pottinger, and other English travellers, have proved that the regions of Cabul, Candahar, and Balk, are, in a political sense, entirely independent of Persia, and present a physical and social system in many respects opposite. Upon the same principle, it seems impossible to concur in the arrangement by which the savage tracts of Mekran and Beloochistan continue to be considered as part of the Persian empire. We shall, therefore, designate this vast and rude interval between that empire and Hindostan by the appellation of Independent Persia; for that of the kingdom of Cabul would apply only to a small part, and would indicate only a temporary and fluctuating state of things. Again, the northern limit to the west of the Caspian has been closely narrowed by Russia, which, by a long train of successful warfare, has annihilated the ancient influence of Persia over the Caucasian regions, and deprived it even of its provinces of Shirwan and Daghestan. In the north-east, not-

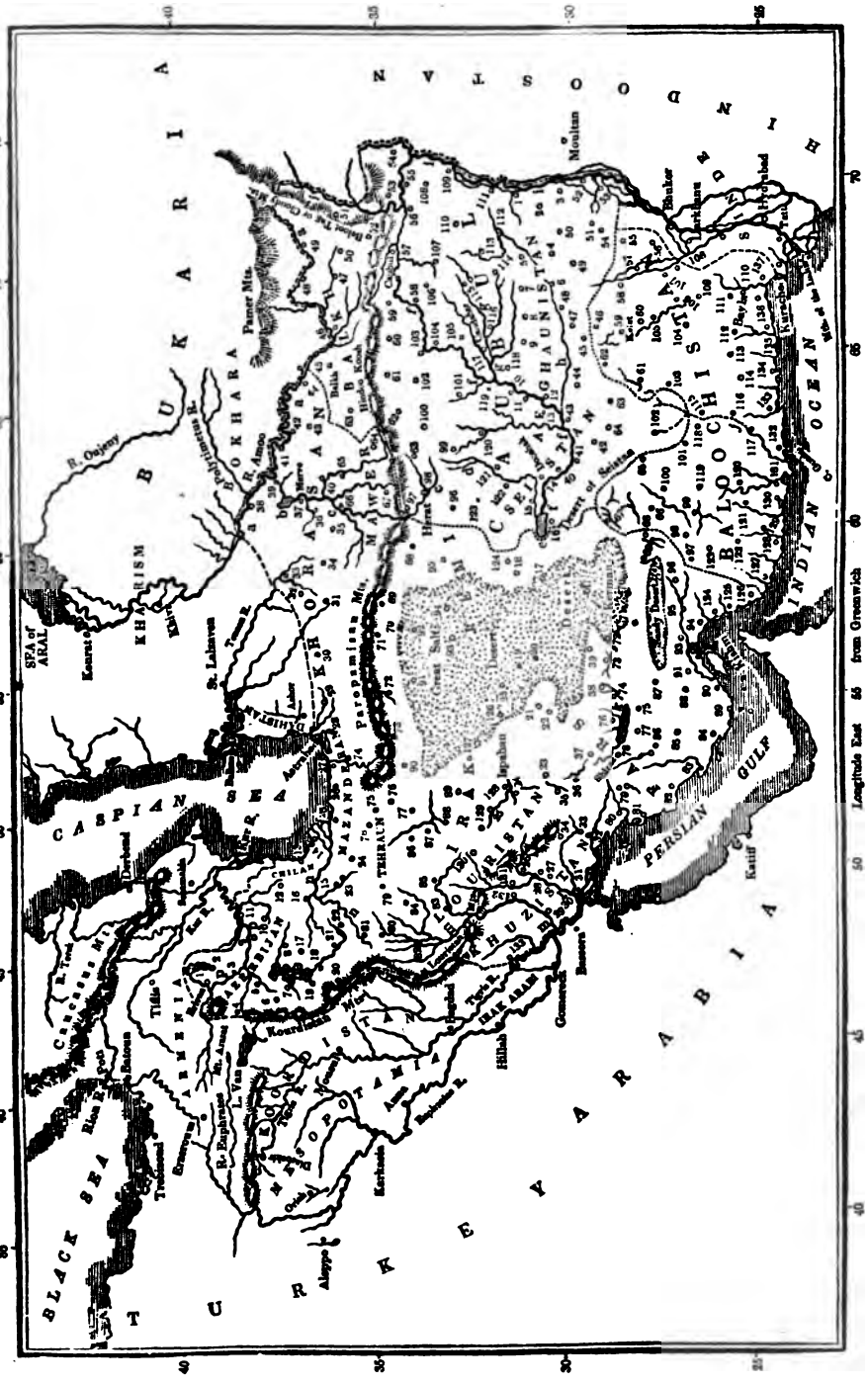
References to the Map of Persia.

NORTH PART.
1. Erivan*
2. Meidan*
3. Nakshivan*
4. Cara Aineh
5. Khoi
6. Kotur
7. Urumea
8. Tabreez
9. Harno
10. Abar
11. Outakand
12. Ardebil
13. Burgoosban
14. Reshd
15. Zengun
16. Mianeh
17. Maragha
18. Meando
19. Shirwan Shaly
20. Bilbahan
21. Hazar
22. Taki Suliman
23. Saltania
24. Casbin
25. Roodesir
26. Amol
27. Balfroosh
28. Astrabad
29. Georgaun
30. Bazangird
31. Meshed
32. Dergiuz
33. Mesa
34. Kelat
35. Coochung
36. Sirikutege
37. Merve
38. Amou
39. Stantan
40. Margishan
41. Koodnam
42. Rilwura
43. Ankoi
44. Chasil Baba
45. Balkh
46. Huzzutimam
47. Fyzabad
48. Durwauz
49. Berzar Beg
50. Munjan
51. Dunnee
52. Wama
53. Bajour
54. Minie
55. Peshawer
56. Jellalabad
57. Cabul
58. Koozeristan
59. Bameen
60. Dehzungee
61. Husunuk
62. Souton Suffee
63. Kuba
64. Kibbermak
65. Boroun
66. Seruhs
67. Toon
68. Khaff
69. Turbut Hyderieah
70. Tursheez
71. Nishapore
72. Bostan
73. Damghan
74. Sarie
75. Teheraun
76. Rubaut Kereea
77. Zerun
78. Soolemania
79. Toozsey
80. Senna
81. Zagha
82. Daimur
83. Kermanshah
84. Hamadan
85. Sunavun
86. Chummurum
87. Koom
88. Kashan
89. Nathunz
90. Sumnum
91. Khanaboody
92. Bajeeshtan
93. Tubbus
94. Toon
95. Ghain
96. Yarkan
97. Ghorian
98. Herat
99. Sakher
100. Khoosroo
101. Comberunee
102. Gudda Khang
103. Dehkoonder
104. Teeree
105. Kherloot
106. Buyer
107. Ghizni
108. Cohaut
109. Karabaugh
110. Oorghoor
111. Bera Ismael Khan
112. Sirmugha
113. Doorchelly
114. Boza
115. Killageeguhool
116. Tujoo
117. Candahar
118. Bain
119. Girrish
120. Polat
121. Furrah
122. Tooj
123. Killach Khan
124. Neh
125. Yezd
126. Charbasbee
127. Nain
128. Ispahan
129. Konsar
130. Abaibad
131. Desfoul
132. Shus
133. Surcar.

SOUTH PART.
1. Buza
2. Sungur
3. Batil
4. Boree
5. Gardou
6. Hindoo Bagh
7. Toba
8. Kozuk
9. Kouchy
10. Bost
11. Kalabeez
12. Dergaspe
13. Sufur
14. Doosbak
15. Pulgee
16. Naswarabad
17. Khubbees
18. Deh Soolan
19. Serjerd
20. Undaroon
21. Kharashar
22. Deh Shircar
23. Yezdikhast
24. Julfa
25. Askaroon
26. Shuster
27. Ahwaz
28. Bundi Kheel
29. Haweeza
30. Sabla
31. Dorak
32. Zeitoun
33. Bebuhan
34. Doore
35. Kishlak
36. Asapas
37. Murgab
38. Killahee Agha
39. Aurabad
40. Tomune Md. Khan
41. Rodbar
42. Mummoo
43. Konasheen
44. Shorawuk
45. Moostoong
46. Kohuk
47. Quetta
48. Sir Kila
49. Toll
50. Drazoo Kot
51. Buhunwala
52. Dera Gazee Khan
53. Jampore
54. Shoree
55. Goree
56. Jaunee Dehra
57. Bhaug
58. Dhadur
59. Kelat
60. Soormusung
61. Sarawan
62. Nooshky
63. Ruins of Goolamshah
64. Booloo
65. Jalk
66. Basman
67. Surhud
68. Regan
69. Bumm
70. Tcheroot
71. Bayun
72. Kerman
73. Bagoan
74. Pa Killah
75. Derabgherd
76. Shuhri Babek
77. Feza
78. Shiraz
79. Kazeroon
80. Zeera
81. Bushire
82. Congoon
83. Nabun
84. Nukhilo
85. Lar
86. Jaron
87. Tarem
88. Tangedelon
89. Mogoo
90. Congo
91. Debrike
92. Gombroon
93. Velazgherd
94. Minab
95. Gireet
96. Hormoz
97. Pureg
98. Oodean
99. Bunpoor
100. Mughees
101. Kohuk
102. Ruins of Regan
103. Kharan
104. Nal
105. Soherab
106. Khozdar
107. Gundava
108. Jaull
109. Kanajee
110. Bayla
111. Laka
112. Noondroo
113. Dost Mahomed's Ft.
114. Ibraheem Bamis Pt.
115. Punjgoor
116. Bhooldra
117. Kedje
118. Kulung
119. Surbaz
120. Kussurkund
121. Gehr, or Giah
122. Bemt
123. Tanoch
124. Cahastag
125. Serrak
126. Soork
127. Jask
128. Kumgoon
129. Balag
130. Chombar
131. Gwutter
132. Gwadel
133. Passanee
134. Chermut
135. Goorund
136. Hungoor
137. Somneane.

Rivers and Lakes.
a Amoor (Oxus), R.
b Badakandir, Lake
c Heret, R.
d Furrah, R.
e Zerrah, Lake
f Helmund, R.
g Turnuk, R.
h Lara, R.
i Indus, R.
j Bhurwur, R.
k Baktegan, Lake
l Karoon, R.
m Haweeza, R.
n Kizil-Ouzen, R.
o Urumea, Lake
p Aras, R.

*[The district containing these towns was ceded to Russia by the treaty of Turkmanshai, in 1828, by which the Russian territory is extended to the Aras.—AM. ED.]


BUKARIA
KHIVA
CASPIAN SEA
BLACK SEA
TURKEY
ARABIA
PERSIAN GULF
INDIAN OCEAN
AFGHAUNISTAN
BALOOCHISTAN
SEA of ARAL
Longitude East 65 from Greenwich

withstanding the loose tenure by which the great province of Khorasan is held, and though Herat, its greatest city, has been in the hands of the Afghans, it would be yet premature to separate that province from the great empire to which it has been so long united.

Persia, thus defined, presents a large, irregular expanse of territory. Its northern boundaries are the Caucasian region, now occupied by Russia, the Caspian Sea, and independent Tartary. On the east, it has that country to which we have given the name of Independent Persia. The Persian Gulf, and a small part of the Indian Ocean, form its limit to the south. On the west is the Turkish empire, from which it is separated by a line drawn somewhat within the Tigris. The empire may thus, in a large view, be considered as extending from 26° to 40° of north latitude, and from 44° to 60° of east longitude, which would give in the former dimension somewhat less, and in the latter somewhat more, than a thousand miles.

This vast region does not present a very varied aspect. Although Persia can boast some of the grandest natural features, they rather range along her boundaries than penetrate the interior. The Caspian and the Persian Gulf are entirely limitary. The Euphrates and Tigris are now within the Turkish frontier. Russia has wrested from her the chain of Caucasus, and Turkey disputes the lofty heights of Ararat. From these two chains, however, branches one of considerable magnitude, which runs through the northern province, leaving only a narrow but fertile plain between it and the Caspian. It is thence supposed to take its course eastward, till it joins the mighty ranges of Hindoo Koosh and Himalayah. Through these mountains is that rugged pass, which the ancients considered as the main access from southern to northern Asia, and to which they gave the appellation of the Gates of the Caspian. Another chain, under the appellation of Alagha Tag, separating from the Taurus, runs parallel to the western frontier, and, under the names of the mountains of Louristan and Bucktori, extends to the Persian Gulf. With these exceptions, Persia is rather a high than a mountainous country; its ridges soon terminate in wide table-lands, traversed by nomadic and pastoral hordes. Between these elevated tracts, however, intervene plains, as those of Shiraz and Ispahan, displaying all that brilliant fertility and beauty which distinguish the favoured regions of these fine climates. The streams which water them, absorbed in cultivation, or expanding into lakes, form merely local features, and never attain a magnitude which can give them a prominent place in the general delineation of the country.

SECT. II.—*Natural Geography.*

The Geology of this country is too little known to afford room for any observations; and the botanical remarks chiefly belong to the mountainous region of Independent Persia. The following observations occur under the head of Zoology.

SUBSECT.—*Zoology.*

The Zoology of Persia, from the little authentic information existing on the subject, appears of a mixed nature, exhibiting many of the European animals, with several others more strictly belonging to Asia. The most remarkable of those common to this country are the following:—

Felis uncia. Ounce.
Arvicola astrachanensis. Astrachan Mouse.
Mus decumanus. Brown Rat.
Mus phœus. Astrachan hamster.

Aspalax typhlus. Spalax.
Sciurus persicus. Persian Squirrel.
Antilope leucoryx. White Oryx.

Antilope subgutturosa. Persian Gazelle.
Antilope Dorcas. Dorcas Antelope.
Rupicapra persica. Persian Chamois.

Of the above, we shall subsequently notice the Spalax, the Brown Rat, and the Persian Gazelle. The Asiatic Lion is stated to be not unknown in the deserts of Persia. The *Lynx caracal* has been called the Persian Lynx, although, from being spread over the northern parts of Africa and of south-western Asia, it does not merit this peculiar designation. The White Oryx Antelope prefers the deserts; and the Dorcas Antilope appears to be also found in those of Northern Africa. In addition to these, Linnæan writers mention the Brown Bear, the Otter, Viverra Mungo *L.*, Striped Hyena, Fallow Deer, and the European Hare, as all inhabiting the Persian Empire.

The Spalax or Blind Rat of Pennant, was formerly confounded with the mole. This singular animal has a thick head, terminating in a very hard and strong cartilaginous muzzle. It was long believed the Spalax was destitute of eyes, nor can any external trace of these organs be seen; but on removing the skin they are found to be perfectly organised, although so small as not to exceed half a line in thickness. On the other hand, the organs of hearing, although externally very small, are shown to be considerably developed, by the great size of the auditory canal. The habits of the animal are equally curious. The Spalax lives in societies beneath the earth: they bore excavations towards the surface in search of roots; but they dig one hole much deeper, into which they retire for shelter and safety. As they prefer cultivated grounds, and subsist principally upon roots, they frequently become a serious evil to the agriculturist. Their movements are precipitate, turning or running sidewise, or even backward, with facility; and they bite most severely. When on the surface, they almost always carry the head raised, apparently for the purpose of more effectually hearing

what is passing around them; thus relying on their most perfect faculty for a forewarning of approaching danger, which they have not the means of detecting by sight. (*Griff. Cuv.*)

The Brown Rat (*fig.* 578.), improperly called the Norway Rat, one of the greatest pests of our dwellings, originally came from Persia and the southern regions of Asia. This fact is rendered sufficiently evident from the testimonies of Pallas and F. Cuvier. The former acquaints us with their migratory nature, by stating that in the autumn of 1729, these animals arrived at Astrachan in such incredible numbers that nothing could be done to oppose them: they came from the western deserts, nor did the waves of the Volga arrest their progress. They only advanced to the vicinity of Paris in the middle of the sixteenth century, and in some parts of France are still unknown. Towards the north their gradual extension has been slow, nor have they yet been found in Siberia.

The Gazelle (*fig.* 579.), has been long immortalised by the poets of Asia and of Europe.

578

Brown Rat.

579

Gazelle.

580

Female Crowned Pheasant.

It is called by the Persians *Tzeiran*, and by the Turks *Jairan:* its size is small, being seldom more than two feet high and three feet seven inches long. The eyes are large, dark, and peculiarly expressive of softness: all its movements are replete with grace, agility, and timidity. It not only inhabits the hills of northern Persia, but is found also in troops in the sandy deserts of Asia Minor, and on the shores of Lake Baikal. It is hunted by the Persians and Tartars for its venison, which is said to be delicious.

The Ornithology does not present us with any subjects of peculiar interest. The Nightingale is well known, and has long been celebrated by the poets of Persia; but whether it is the same species with that of Europe may safely be questioned.

The female of a new species of crowned Pheasant, belonging to a decidedly Asiatic group (*Lophophorus Nigelli*) (*fig.* 580.) has recently been discovered in the more secluded and mountainous parts of Persia, where it is called the Mountain Partridge: it is so rare, that the male bird has not yet been seen in Europe. The female measures about twenty inches in length: the colours are brown varied with black, with the throat and sides of the neck white.

Of the Domestic Animals, the Persian breed of Goats is peculiar. The horns form an acute angle to the front; the ribs not very broad, with the margin undulated, and the posterior part rounded. It has long coarse brown hair, tipped with rufous, and a large tuft stands forward between the horns, like the forelock of a horse. The two-humped or Bactrian Camel, and the Dromedary or Arabian Camel, are both in general use as beasts of burden. The Persian Horses are esteemed inferior alone to those of Arabia, and the preservation of the noble breed is attended to with equal care. Towards the northern provinces there is a much stronger race, used for cavalry.

Sect. III.—*Historical Geography.*

The Persian empire is celebrated in history. In its vicinity, and almost on its site, were the great and early monarchies of Assyria and Babylon. The name and people of Persia were then confined to the mountainous districts of Fars and part of Kerman; while the Medes, tributaries of Babylon, held the fine plains of the interior. The Persian empire was formed after the triumph of Cyrus over Babylon; and, by the addition of Syria, Egypt, Asia Minor, and part of India, attained a magnitude unprecedented. The progress of luxury and effeminacy having sapped those manly virtues by which the Persians rose to power, they were unable to withstand the hardy and disciplined troops of Macedon, and this country, with all its conquests and possessions, was rapidly swallowed up in the Macedonian empire. Persia ceased to have an independent government, and was subject partly to Seleucus, and partly to a Greek kingdom formed in Bactriana. In the third century before Christ, Artaxerxes rescued his country from foreign sway, and founded Parthia, a monarchy which has ever since retained nearly the same limits. It acquired distinction in history by setting bounds to the conquests of Rome, and by frequently defeating the armies of that power. About the

year 220, the Parthian dynasty was subverted by that of the Sassanides, who restored the name of Persia, with its ancient religion and laws. It could not, however, withstand that torrent of fanatic invasion which in the seventh century over-ran a great part of the East. After one great battle, the native dynasty was subverted, and Persia received the new faith and the new laws, which have ever since ruled over more than the half of Asia. This Saracen dynasty, which soon began to exert an influence friendly to science and civilization, was subverted, in its turn, by successive Tartar invasions under Zingis, Timur, and the race called Turks. These successively supplanted each other; and Persia became, during many centuries, a dreadful theatre of war and devastation. She possessed, however, a native energy, by which she ultimately repelled every foreign yoke. In 1586, Abbas, justly surnamed the Great, raised himself to the throne; and, by enforcing a rigid administration of justice, and encouraging every species of industry, restored Persia to much of that prosperity for which nature had destined her. After thus flourishing for more than two centuries, she was desolated in the most cruel manner by the successful invasion of the Afghans, who carried fire and sword to her remotest extremities, and reduced her proudest capitals to ashes. In about fourteen years, Nadir Shah vindicated the independence of his country, and, under the name of Kouli Khan, carried her victorious arms into India; but this fierce conqueror suffered her to taste none of the blessings of peace. His death without any regular successor, affording scope to the contending claims of a number of chiefs, gave rise to a long and furious civil war, which almost rent Persia to pieces. She enjoyed an interval under Kurreem Khan, an able chief and one of Nadir's lieutenants, who having at length triumphed over all his rivals, endeavoured during sixteen years to heal the wounds of his native country. His death, in 1779, was followed by a new train of civil wars, only terminated, in 1792, by the triumph of Aga Mohammed, an eunuch, who transmitted the throne, in 1796, to Futteh Ali Shah. Persia, under his administration, began to respire. Although he had severe contests to maintain with the Russians, who wrested from him extensive provinces, internal peace was preserved, and considerable exertions were made to improve the condition of the country.

SECT. IV.—*Political Geography.*

The Persian monarchy is more deficient than even other Oriental states in all that belongs to a constitutional system. The sword alone reigns. Those strict and immutable laws, for which she was anciently celebrated, have, by successive revolutions, been entirely obliterated. The despotic principle inculcated in the Koran, by which the sovereign exercises a divine right over the persons and properties of his subjects, is fully recognised. All the resources of Oriental exaggeration are exhausted by the grandees in the lofty epithets with which they address the monarch, and the humble appellations which, in his presence, they apply to themselves. It is remarked by Porter, that there never was such a thing as a popular commotion in Persia; a remark which does not apply to Turkey. The numberless contests for power have been carried on merely by the princes and their adherents; the people look on as spectators, ready to be transferred to one or other as the fortune of war may decide. Yet, though there are no legal, there are some rude actual limits to the royal authority. The khans of the upland districts, ruling over tribes attached to them by ties of kindred and clanship, enjoy permanent and hereditary rights, to which the sovereign seldom attempts to refuse his sanction. They pay merely a tribute, and furnish their quota of troops in war, but are not interfered with in the internal administration of their district. As they form the military strength of the empire, the most powerful monarchs dare not offend them; and as, from motives of personal attachment, caprice, or ambition, they are often ready to espouse the cause of different pretenders to the throne, they have a powerful influence in perpetuating those evils of disputed succession to which Persia is liable. From the khans the principle of hereditary succession has taken deep root in the political system of Persia. It formerly extended even to the governors of cities and provinces, who were also collectors of the revenue; but under the dynasty of the Abbassides this system was changed, and the power intrusted to removeable officers. Although the patronage and even the revenue of the sovereign were thus augmented, the measure is supposed to have been substantially injurious to Persia. These high-spirited chiefs, who had a real interest in the prosperity of their districts and of the empire, have been replaced by the base creatures of despotism, who had no object but to amass wealth by the temporary possession of power. The precarious tenure by which they hold the throne induces the sovereign to employ strange and barbarous methods of crushing the attempts of rival claimants. Mutilation, particularly the putting out of the eyes, is the method particularly employed against those from whom danger has been experienced or apprehended. The daughters of the king are given in marriage not to the nobility, but to the priesthood, excluded by their profession from any pretensions to reign.

Persia, though a warlike kingdom, has scarcely any force which can be considered a regular army. There is a body of 2000 or 3000 horse guards, called Goolam, composed of youths of distinction, who assume, however, the title of royal slaves. A larger body of

10,000 or 12,000 cavalry have lands assigned them round the capital, and are ready to attend the king when called upon. But the main force of the Persian armies has always consisted of their highland tribes, led by their khans. The number which can be called out on an emergency is estimated at 150,000, 200,000, or even 250,000. They possess many of the qualities of good cavalry troops, are well mounted, skilful horsemen, personally brave, and inured to hardships. They handle their arms with the greatest dexterity, but have not the least idea of discipline, tactics, or the art of war. A late traveller compares them to "an army of wild animals from the jungle, led on or scared by accidents." They are arrayed, indeed, according to their tribes, under their khans; but the review of a corps consists merely in causing the troops to march past individually, to show their persons and equipments. They will often, as humour leads, abscond in large bodies, or turn back without seeing an enemy. Through these defects they are altogether unable to bear the shock of disciplined European troops, and have always been vanquished in pitched battle. But as voltigeurs or light cavalry they have scarcely their equals in the world. They hover round an enemy, cut off his provisions and water, make sudden onsets, and insensibly wear him out. The most formidable regular army, when once involved in the heart of those endless and trackless plains which compose the interior of Persia, can scarcely fail to be finally overwhelmed. Thus, the Parthians destroyed the armies of Crassus and Julian, and have always been invulnerable except against Afghans and Tartars, nations of migrating horsemen like themselves.

The present sovereign has made extraordinary exertions to form and discipline a corps after the European manner. This system was first introduced by Gardenne, a French envoy sent by Bonaparte for that purpose, with the view of acquiring an influence in the court of Persia, and of rendering it an instrument for shaking the British empire in the East. Sir Harford Jones, however, succeeded in opening the eyes of the shah to the ambitious designs of that potentate. The English then succeeded to his favour; and arms and officers were supplied from England. The system was carried on. According to Sir R. K. Porter, the actual amount was about 12,000 men in infantry and artillery, who went through their exercise in a very tolerable manner. The cavalry, however, accustomed to roving excursions, and believing, with truth, that they could manage the sabre better than any troops in the world, could not be brought to place themselves under discipline. These troops were neglected by the late sovereign; and, on the breaking out of the war with Turkey, the English officers, not being allowed to serve against that power, were almost all dismissed. The regular army was reckoned by Mr. Frazer at 9400 foot and 1200 horse; and from the provinces of Aderbijan and Erivan, he could levy about 40,000 irregulars.

An unhappy circumstance in the condition of Persia consists in the numberless predatory hordes by which the country is ravaged. Her fertile plains are everywhere intermingled with mountains and deserts tenanted by these rude banditti. Even those who defend the country in war, plunder it during peace. That mountain chain, in particular, which we have traced from Armenia to the Persian Gulf parallel to the great road that passes through the kingdom, forms a "labyrinth of countless ravines and formidable gorges," whence they can issue forth to lay waste the finest plains, and attack the richest caravans. In consequence of their continued *cheepaos* or forays, many of the finest tracts are now abandoned by the husbandman, and given up to those marauders. To repress them was one of the grand objects of the policy of Abbas, which he pursued by measures cruel, indeed, but vigorous. The present monarch, less energetic, and residing in the northern extremity of his empire to watch the movements of the Russians, does not seem to have taken such effective steps for this object.

The only attempt of Persia to form a navy has been on the Caspian Sea, and in this she has never succeeded.

Sect. V.—*Productive Industry.*

The Persians are an active and laborious people; and if all the branches of national industry are in a low state, it is owing only to the anarchy of the government, and the inroads of the predatory tribes.

In regard to agriculture, the country labours under considerable disadvantages. The interior, as formerly observed, is not traversed by any great rivers, and a great part of the soil is naturally salt, sour, and arid. This evil, however, in the better days of Persia, was in some degree obviated by artificial irrigation; and at all times the plains of Ispahan and Shiraz, and the provinces on the Caspian, have displayed an exuberant fertility. The kinds of grain cultivated are chiefly those of Europe, particularly wheat; for rice, which would naturally have been the staple of the southern provinces, cannot be raised there for want of water. In return, the fruits are of peculiar excellence, and some of the most valuable are even traced to Persia as their native country. The melon is supposed to be there unrivalled, the orange is of peculiar size; the fig, the almond, the peach, the apricot, are all good. The vine and its produce were once the pride of Persia; and, notwithstanding the severe prohibition against its use, the wine of Shiraz continues to be the theme even of Eastern poetry. Those

of Yezd, of Ispahan, and of the hilly provinces in the north, are all esteemed. In these last, the mulberry tree grows in such abundance as to render silk a staple product of the empire, and in its days of prosperity a large article of export. The plains of these provinces afford also extensive plantations of the sugar cane; which, however, is used only in its raw state. They abound also in woods, which are turned to little account. After all, it is to pasturage that the greater, and of late an increasing, portion of the surface of the empire is devoted. In these tracts the primary object is to rear those fine horses which are in universal demand; for every Persian rides, and delights in the possession of the finest horses he can possibly procure. Those of the Turkman breed are preferred to the Arabian; for, though inferior in swiftness, they are stronger and more serviceable; and, though not equally light and elegant in form, they are tall and handsome. Sheep of the long-tailed species are bred in great numbers, and their wool forms the basis of the finest manufactures. Kerman produces a breed of goats yielding wool, which has, in a certain degree, the qualities so much esteemed in that of Cachemire. The camel, the ass, and a valuable species of mule, are used for the conveyance of burdens.

Persia, during the days of her prosperity, was greatly distinguished as a manufacturing country. Her fabrics, suited to the Oriental taste, have supported not only the ostentatious magnificence of her courts and great men, but those of Turkey, Tartary, and even Northern Africa. The women of the wandering tribes weave from the wool of their sheep those rich carpets which we call Turkey, from the place of their immediate importation. They form through the East the most important branch of ornamental furniture. The carpets of Herat, in Khorasan, possess the highest reputation. The next staple consists in silk fabrics, rich and ornamented, particularly brocade and embroidery. Sometimes the tissue is entirely silk, sometimes mixed with cotton and wool. Under the Abbasside dynasty, the precincts of the court contained great works of tapestry, composed of silk and wool embellished with gold; but this art, though not entirely lost, languishes for want of encouragement. Arms, particularly sabres of a superior quality, and richly embellished with gold, silver, and precious stones, are prepared on a great scale, to meet a sure demand; and in this branch no decline has been observed. The manufacture of earthenware is very extensive throughout Persia, and some of its products almost rival the porcelain of China. These, with shawls made from the goats' wool of Kerman, leather, paper, and jewellery, complete the list of her principal manufactures.

Persia is not a mining country. Nature has not been bountiful in this respect, and art has done nothing to improve the little she has bestowed. Considerable quantities of copper are drawn from the mines of Mazanderan and Kerman; but those of iron and silver are neglected; for the silver mines of Maden now belong to the Turks. Salt is only too abundant; for a great part of the surface, whenever left to itself, is covered with a saline crust, which renders it unfit for vegetation. Persia abounds, however, with those fat and oily minerals which in other countries are rare. Bitumen and naphtha are found in all the countries bordering on the lower Euphrates and the Tigris; they serve as cement, as pitch for lining the bottoms of vessels, and as a substitute for oil in lamps. A small quantity of a species of black liquid petroleum flows from a rock in Kerman, which is made a royal monopoly. The king also claims the right of selecting the best from among the turquoises of Khorasan.

The foreign trade of Persia may be described in few words. The Caspian, besides its difficult navigation, communicates solely with the south of Russia; and the spirited attempts of the English to open a trade across so many natural obstacles had no result. In the Persian Gulf, the splendid settlement of the Portuguese on Ormus was only temporary; and since Persia lost the countries on the Euphrates, she can obtain Indian commodities only by the ports of Bushire and Gombroon.

SECT. VI.—*Civil and Social State.*

The actual population of modern Persia was guessed by Chardin at 40,000,000; but this number is considered by all to be beyond the truth, at least in the present day. Among geographical writers, Pinkerton hazards the estimate of 10,000,000 for the whole, including Candahar; Malte-Brun that of 6,000,000, or 8,000,000 for Western, and the same number for Eastern, Persia. We should suspect both these estimates to be under the truth. Mr. Elphinstone, founding on an estimate which, though conjectural, seems to have been carefully made, conceives the kingdom of Cabul, independent of its Indian possessions, to contain 8,300,000; and if this rugged mountain territory, interspersed with huge deserts, hold such an amount, imperial Persia, of considerably greater extent, and containing fertile and highly cultivated plains, ought, after all its losses, to maintain a greater. We should think 12,000,000 nearer the truth, which, after all, would not make one-third of the density of England. It would nearly agree with Mr. Kinneir's idea of 18,000,000 or 20,000,000 for the whole country between the Euphrates and the Indus.

The physical character of the Persians is fine both as to strength and beauty, but without possessing any very marked features. So many migratory nations have settled in the coun-

try, that it retains only a fragment of its native race. The complexion, according to the climate, varies from an olive tint to a deep brown.

In disposition, the Persians, with a portion of the grave exterior peculiar to the Orientals, manifest a disposition considerably different. They are gay, lively, and animated, and have even been termed the Parisians of Asia. It seems to be their principle to "take the world lightly." This prevailing *gaiete de cœur* and courtesy of manner render the society of the higher ranks particularly amiable, while that of the lower is at least free from rudeness. The humblest peasant, from the old man to the boy, expresses himself with civility. They seem to understand the administration of flattery better than perhaps any other nation; and, besides directly lavishing hyperbolical compliments, take the most delicate circuitous modes of inducing the belief that their sentiments are sincere. The stranger, however, who, from these flattering appearances, has conceived the most favourable idea of the Persians, soon finds, on a nearer intercourse, that "they are mere whited sepulchres;" that the most profound dissimulation, and the grossest falsehood, mark their whole conduct; and that self-interest almost universally is the sole spring of action. Thus avarice impels them to over-reaching extortion, and all despicable modes of collecting money; while the tyranny of the government drives them to the subtlest expedients for its concealment. At the same time, they are represented by Chardin as the greatest spendthrifts in the world; exhibiting in their dress, their houses, and their harems, a splendour beyond their fortune. They were observed to take a peculiar latitude relative to that precept of the Koran which forbids the use of wine.

In regard to their faith, the Persians adhere to that grand Mahometan schism, at the head of which was Ali, the son-in-law of Mahomet; and, on account of some trifling distinctions, they and the Turks, who are followers of Omar, mutually doom each other to everlasting perdition. The political rivalry of the two nations has, no doubt, tended to embitter this enmity. In other respects, the Persians display little of that bigoted and persecuting spirit which reigns among the nations by whom the Mahometan faith is professed. Europeans, in passing through the country, are not treated as objects of horror and opprobrium; and even the long and cruel persecution practised against the Guebres, or ancient worshippers of fire, by which that unfortunate race was almost exterminated, has now ceased. About 4000 of them reside unmolested in Yezd and in other cities of Kerman.

The Persians are the most literary people among the Asiatics, at least of modern times. Poetry, in particular, is a ruling passion; and Hafiz, Sadi, and Ferdusi, have displayed an Oriental softness and luxuriance of imagery, which have been admired, even in European translations. Ferdusi is the epic poet of Persia: the theme of Sadi is wisdom and morality; while Hafiz has strung only the lyre of love. The latter is the most popular poet, though strict Mahometans scarcely consider it lawful to peruse his verses, unless after straining them into a refined and mystical sense. The monotony of Eastern manners, especially in what regards the female sex, precludes that variety of scenes and situations which gives interest to the love-stories of Europe. Elaborate descriptions of the beauties of the beloved object, of the miseries of absence, and the joys of presence, are expressed in those hyperbolical terms and that flowery imagery peculiar to the Oriental writers. The late emperor had a poet in constant attendance, whom he extolled to the English embassy as superior to any other bard of the age, and even to any on earth; and, not contenting himself with empty praise, gave him a gold tomaun, nearly two pounds sterling, for every couplet. As no specimens, however, have been produced of the works of this modern Hafiz, we cannot estimate the real value of these extravagant plaudits.

The sciences have also been cultivated in Persia with ardour; and considerable assiduity is still shown in the prosecution of them; but the splendid establishments by which they were supported are in utter decay. The late king did all in his power to revive the study of the sciences formerly cultivated. Morals, however negligently practised, are an object of diligent study; as are also geometry, arithmetic, the Turkish and Arabic languages, but above all medicine and astrology, which last is the high road to fame and fortune. Europeans, on account of their ignorance of this vaunted science, are held in contempt. According to an old writer, 400,000*l.* were annually spent on its fallacious professors; and though the sum is doubtless much smaller at present, the craft of divination is not the less esteemed.

Persia contains fragments of several ancient languages, of which the Zend is known only by the Zendavesta, a religious work preserved by the Guebres, but of which the authenticity and antiquity are a subject of controversy. The Pehlvi appears to have been the court language of Persia during the period of its connection with Greece and Rome. Under the dynasty of the Sassanides, the preference was given to the Persic, the dialect of their native province of Fars. This language having been enriched by a mixture of Arabic introduced by the Saracen conquerors, and polished by a succession of great writers, who made it the vehicle of their effusions, has become the most refined and classic in the East, and is spoken not only at the Persian court, but at the Mahometan courts of Hindostan. Its close alliances with all the branches of the Teutonic, and with the ancient Greek and

Latin, have afforded ample ground to exercise the ingenuity of the etymologist. Meantime the Turkish, introduced by the irruption of the Turks from Western Tartary, and implanted during their temporary dominion, is spoken extensively among the people.

The Persians, as already observed, surpass in pomp the other Oriental nations. This magnificence with them, as with the others, does not display itself in houses and furniture. The mansions even of the richest present to the street only dead walls of clay, and a mean door, leading to a large interior court, into which all the apartments open. These apartments are spacious and commodious; but they contain scarcely any furniture, except carpets, on which the owners sleep, sit, eat, and pass the greater portion of their lives. Their dishes are merely trays of painted wood, or copper tinned. Their baths, paved with marble, open to the sky, and furnished with every provision for magnificence and coolness, are also their favourite resorts for pastime. The Persians are splendid in their attire (*fig.* 581.). Gold, silver, and precious stones, proscribed by the Turks, are lavished by them on their head-dress, their robes, and particularly their sabres, many of which are thus raised in value to 15,000 to 30,000 piastres. The beard, highly respected over all the East, is viewed by the Persians with peculiar veneration: they spare no pains in embellishing it, in making it thick and tufted; they even adorn it with jewels. Their horses are the objects of still greater attention. Even a man who has not clothes worth half a guinea will have a good horse.

581

Persian Khan.

The women of rank wrap multiplied folds of silk round their heads, and wear long floating robes; nor do they ever appear in public without long veils (*fig.* 582.). The harems of the great are filled, as over all the East, by negotiation with the family of the bride, and by the purchase of Georgian and Circassian slaves. From the lavish use of the warm bath, or from some other improper regimen, the beauty of the fair sex is of very short duration. "In eight or ten years," says Porter, "the lately luxuriant and sportive beauty becomes thin, withered, rheum-eyed, and every way a hag." The son takes precedence entirely according to his father's rank: as to the mother, whether she have been wife, concubine, or slave, is considered a matter of indifference.

582

Woman of Rank.

The Persians are simple in eating, and use little animal food. Pilau, or rice stewed with various ingredients, forms their favourite dish. The chief luxury of their table consists in a profusion of the finest fruits.

SECT. VII.—*Local Geography.*

We commence our description with Ghilan, a long narrow province, formed of a plain which extends 200 miles along the Caspian, and is bounded inland by a range of mountains which can be penetrated only by a few narrow passes. There is no river of any magnitude except the Kizil-Ouzen, which, after traversing a considerable part of Persia, forms the boundary between this province and Mazanderan. Numberless streams, however, descending from these mountains to the Caspian, maintain an almost excessive richness of vegetation; for the fruits, though in the greatest profusion, are considered unwholesome. Reshd, the capital, is described by Mr. Frazer as a flourishing commercial city, having from 60,000 to 80,000 inhabitants, with well-kept bazaars, but abounding in beggars; its harbour is unsafe in stormy weather. Large crops of wheat, rice, and other grain, cover the fields; but the staple production is silk, which is either worked up within the province, or exported to Astrachan. The air is rendered very unhealthy, by excessive moisture, with which it is so impregnated, that metallic instruments can scarcely be preserved from rust. From its mountain streams, and luxuriant verdure, Ghilan exhibits the most beautiful and romantic sites even in this picturesque empire.

To the west of Ghilan is Aderbijan, or Azerbijan, also encircled by mountains: on the north those of Armenia, while on the south those of Koordistan, in an accumulated mass, raise their towering heads to the clouds. This province is traversed by numerous smaller hills, and being well watered by the Aras, Kizil-Ouzen, and other streams, is one of the pleasantest and most fertile regions of Persia, though the prosperity of the people is much depressed by the tyranny of their rulers. No city in Persia was more illustrious than Tabreez, or Tauris, both as a splendid capital and a seat of commerce; and in the time of Chardin, it was supposed to contain 500,000 inhabitants. Nature and man have co-operated in its destruction. It has been sacked eight different times, and has been shattered by repeated and dreadful earthquakes. Of the 250 mosques numbered by Chardin, only three could be traced by Sir R. K. Porter. That of Ali Shah, 600 years old, still retains traces

of the greatest magnificence, being cased with lacquered tiles of porcelain, disposed and adjusted into intricate and elaborate figures, and surrounded with a complete band of gilded Arabic sentences, embellished with flowers in green and gold. There is also a splendid tomb of Sultan Cazan, without the city. Ardebil, a fine old town, and a seat of the shahs, is likewise much declined. The western part forms a picturesque and flourishing district, surrounding the lake of Urumea or Oormiah, which is about 300 miles round, salt like the sea, emitting a sulphurous smell, and of such quality that fish cannot live in it. Urumea, the reputed birth-place of Zoroaster; and Maragha, the favourite residence of Hoolaku, where that great prince built his famous observatory, are ancient and still flourishing towns.

Mazanderan forms on an extended scale the continuation of the small line of plain, backed by mountains, and is the southern boundary of the Caspian. The wheat is not good, and silk is not cultivated to the same extent as in Ghilan; but rice is raised in vast quantities, and the sugar-cane abounds. It is, too, a very picturesque province, and, moreover, the seat of a brisk trade. It is unhealthy, not quite so much so as Ghilan, though from the same causes. Its southern boundary is Mount Elburz, which stretches along the whole length of the province, and eastward into Khorasan. Demavend, forming its loftiest peak, is situated in a district called Taberistan, and across it is that long defile called the Caspian Gates, leading from Teheran to Amol.

Mazanderan contains a number of pretty little cities. Lari, the residence of the governor, is small, but well fortified and very ancient, containing several lofty temples of the early Guebres. Balfroosh, however, is the largest town, and carries on a very extensive commerce. Enjoying free trade, and having been protected by a wise governor from the revolutions which were laying waste other parts of Persia, it has lately flourished in an extraordinary degree, and is reckoned by Mr. Frazer to contain 20,000 people. It is but meanly built, however, in a low damp valley, about a mile and a half in circumference. Amol is a very old town, celebrated for its bridge, and containing a manufactory of iron. The population is stated at 35,000 or 40,000; but a great proportion consists of shepherds, who in the summer go up to the mountains. Ferabad and Meshed are agreeable sea-ports, with some trade. Ashruff, which Abbas attempted to make a naval arsenal, and at which he built a magnificent palace, has since his time fallen into neglect. The most eastern part of Mazanderan is composed of the agreeable district of Astrabad, the ancient Hyrcania, and sometimes reckoned a separate province. The town has some silk and woollen manufactures, and carries on a commercial intercourse between Turkey and Persia. From its vicinity to the turbulent race of Turcomans, it has often been the seat of insurrection. To the east is Goorgaun, the ancient Hurkaun, still a very strong fortress, celebrated in the wars between Persia and Tartary.

Eastward from Mazanderan is Khorasan, the most extensive province of Persia, from whence that empire passes insensibly into the boundless plains of Independent Tartary. During the late weak and distracted state of the monarchy, this limitary province has been in a great measure alienated. The Afghans hold Herat, now the most populous of its cities; and the king of Bochara holds the north-eastern districts. Not content with this acquisition, he makes, with his swarms of irregular horse, continual inroads into the rest of the province, lays waste the country, and carries off the inhabitants as slaves. These desolations have converted Khorasan, from one of the most fruitful regions in the world, almost into a desert. It appears nothing uncommon, when the gates of a city are opened in the morning, for a body of Tartar horse, which has been lying in ambush, to rush in, set fire to the town, and carry off the inhabitants into slavery.

Meshed is considered the capital of Khorasan. It is a large and strongly fortified city, situated in a fine plain, and distinguished by the superb sepulchre of Haroun al Raschid. Though much decayed, it still numbers 50,000 inhabitants. To the south, Nishapore, once a splendid capital of Persia, and continually rising anew, after its destruction by Alexander, by the Arabs, and by the Tartars, was, when it had become the capital of the Turkish princes of the Seljuk dynasty, so completely destroyed by Zingis Khan, that the inhabitants, on returning, could not recognise their own houses. Its 12,000 aqueducts are now dry, and its population, occupying a mere corner beyond its former circumference of twenty miles, are reduced to 15,000. Tursheez, Tubbus, Serukhs, Tabas, are large towns with some trade, still included in the Persian dominion. Herat, now comprised in the Afghan domain, is the finest city in Khorasan. It is situated in an extensive, somewhat elevated, but most fertile plain, which produces wheat, barley, and fruits in the greatest abundance. It is the emporium of the trade between Persia and the East, which is carried on chiefly by 10,000 Jews and 600 Hindoos who inhabit the city. Meru-Shah-Jehan, or Merve, the principal town of the Tartar division of Khorasan, is governed by a brother of the king of Bochara. Among the many ephemeral capitals of Persia, none surpassed the fame of this city when it was the residence of Alp Arslan, the most powerful prince of his time. By the vicissitudes of war, and the devastations of the Uzbecks, it has been almost annihilated.

Having disposed of these northern divisions, we come to Irak, the grand central province,

which forms, as it were, the body of Persia. It is understood to have composed the ancient Media. This province is almost entirely traversed by chains of mountains, with long valleys intervening, from ten to fifteen miles in breadth. The mountains are naked and barren; but the valleys would amply repay the highest culture, were it not for the desolation brought on them by civil war and misrule. Indeed, in the most deserted tracts, the ruins of cities and aqueducts still indicate their former prosperity, which part of them, under the management of an enlightened governor, are beginning to recover. The eastern part of this province, with the adjoining tract of Khorasan, is occupied by a salt desert of great extent.

Irak is, as it were, covered with splendid cities and celebrated capitals, most of them in a state of ruin, from which a few are beginning to rise. Among these, Ispahan, or Spahawn (*fig.* 583.), stands pre-eminent. By the caliphs of Bagdad it was made the capital of Persia; and being placed in the centre of the empire, surrounded by a fertile and beautiful plain, it became a rendezvous of the inland commerce of Asia, and attained an extent and splendour unrivalled in Western Asia. It was destroyed by Timur, but restored by Shah Abbas. Chardin reckoned that in his time it was twenty-four miles in circuit, and contained 172 mosques, 48 colleges, and 1800 caravanserais. The most magnificent edifice was the palace, the gardens attached to which occupied a space of five miles in circumference, and were interspersed with the most splendid pavilions. The Midan, a square, serving for military reviews and for a market-place, round which were built the palace, and a number of splendid mosques; with the Chaur Baug, a long avenue of plane trees, were also distinguished ornaments of Ispahan. The Zenderood, a fine river, giving fertility to the plain of Ispahan, which it is expended in irrigating, traverses the city, is conducted through its gardens and pastures, and crossed by several magnificent bridges. This magnificence of the public structures is combined, as usual in Asia, with meanness and wretchedness in the streets, and in the huts occupied by the mass of the people. In 1722, it was taken and almost destroyed by the Afghans, and, the later sovereigns having preferred a northern residence, no exertions have been made for its restoration. A man may now ride through it for miles without seeing an inhabited house; only three colleges are open; and its proudest edifices present only piles of rubbish. It is still, however, a great city, with extensive trade, and some flourishing manufactures, particularly of gold brocade. Hussein Khan, a native, who has raised himself to extraordinary wealth, is making great efforts to revive its magnificence.

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Ispahan.

Teheran (*fig.* 584.), founded by Kurreem Khan, is situated at the northern extremity of

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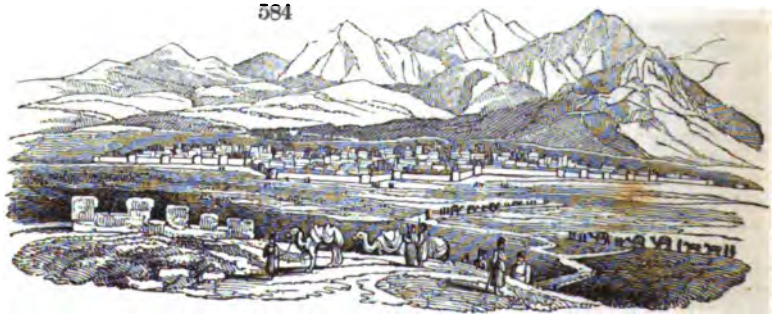

Teheran.

Irak proper, at the foot of the loftiest mountains of Elburz. The last sovereigns have made it their residence, in consequence of its vicinity to the Russian frontier, the theatre of almost perpetual war. It is four miles in circumference, strongly fortified, and rather a camp than a city. It has no grand edifices except the *ark*, combining the character of a palace and of a citadel. In summer the place becomes so extremely unhealthy, that all leave it who can. The king with the troops, and the chiefs with all their trains, depart, and encamp on the plains of Sultania. The population of the city thus varies according to the season, from 10,000 to 60,000. Adjacent to Teheran are the remnants of the ancient Rhagæ, mentioned as a spot to which the Jews were conveyed after the Babylonish captivity. It continued a great city till destroyed by the generals of Zingis Khan. The remains are of sun-burnt brick, and the whole surface for three miles in every direction is marked by hollows, mounds, mouldering towers, tombs, and wells.

Among all the fallen capitals of Persia, none lies so low as Sultania. Its broken arches and mouldering remains, displaying all the pomp of Oriental architecture, are mixed with a few cottages of peasants, inhabited by about 300 families. There is in particular a grand unfinished mosque, in the interior of which the whole Koran is written in ornamented characters. Casbin, or Casween, though it has lost its grandeur as a capital, is still a neat flourishing city with a considerable trade. Koom, on the contrary, is described as a large straggling wilderness of ruins, all crumbling and tumbled into heaps. It has, however, been in part rebuilt; and the modern structures are confusedly mixed with the ancient. A road along the great salt desert leads from Koom to Kashan, a city still very flourishing, particularly by its manufactures of silk brocade. It commands a magnificent view of the mountains of Taurus.

The western part of Mount Irak is mountainous and irregular, though still interspersed with rich plains. Here occurs Hamadan, supposed the ancient Ecbatana, and presenting, in fact, the appearance of great antiquity. It is still large; though, since its destruction by Timur, it has never held more than a secondary rank. It is finely situated near the lofty peak of Elwund, but suffers under extreme cold during eight months of the year. Still farther west is Kermanshah, a large and flourishing town, bounded by a long range of mountains. Those to the north present some remarkable sculptured rocks. Besittoon forms a high and perpendicular rock, cut smooth on one side, and impending over the road like a canopy. In one of its most inaccessible points is sculptured a group of figures representing a procession. Taki Bostan is a more remarkable feature, and presents a series of excavations made in these mountains; the most considerable of which is an arch cut in the rock, fifty or sixty feet in height, and twenty-four feet wide. The figures represented are numerous, executed with great precision and judgment, in a manner which Mr. Kinneir conceives would not have disgraced the finest artists of Greece and Rome. They are very similar to those of Persepolis, and, though ascribed by some to Semiramis, seem traced, on much more solid grounds, by M. de Sacy, to the Sassanian dynasty.

The south-eastern part of Irak is arid and poor; yet it contains the large city of Yezd, still flourishing as a seat of commerce, and of a valuable silk manufactory. Here is the remnant, amounting to about 16,000, of the persecuted race of the Guebres. Yezdikhast, the most southern town, is of some consequence, from its situation on the high road from Ispahan to Shiraz.

To the south of Irak is Fars, a province of much less extent, but interesting, as it composes that territory which was originally called Persia, and whose hardy inhabitants subverted the kingdoms of Media and Babylon. Its western part consists of chains of lofty mountains, forming part of that great range which extends from Caucasus to the Persian Gulf, and with fertile though often neglected valleys interspersed. The eastern part is a large plain, often sandy and arid, but, when supplied with water, very fertile, particularly in tobacco.

Shiraz, or Shirauz, though neither very ancient nor very extensive, has long been one of the boasts of Persia, from the beauty of its environs, and the polished gaiety of its inhabitants. It has been the favourite seat of the Persian muses, and near it are still to be found the tombs of Hafiz and Saadi, the chief of the national poets. Its wines are celebrated as the most valuable in the East; and it is the seat of a considerable and increasing trade; but since it ceased to be the residence of Kurreem Khan, the inhabitants have lost their character for taste and refinement. The latest travellers have found the romantic spots, so celebrated by Hafiz, abandoned to decay. The bower of Mossella was desolate, and the pure waters of Rocknabad choked with rubbish. The tomb of the poet was surrounded by common graves, and no longer adorned with a copy of his poems. That of Saadi, situated in the hills, at the distance of two or three miles, was equally neglected.

Near Shiraz is the large salt lake of Baktegan, from which a great part of Persia is supplied with salt of a peculiarly fine quality. To the north, along the road to Ispahan, are the plains of Oojan and Kooshkijerd, which, though now in a great measure abandoned to the wandering tribes, are still capable of becoming again the garden of Persia.

The only other place of much consequence in this province is Bushire, or Abu Shehr, which, since the empire lost Bassora, has been the emporium of its foreign trade. This is chiefly with India; and it is not sufficient to render the town either large or handsome. Large vessels cannot anchor nearer than six miles, in a roadstead which, though good, is not perfectly safe in north-west winds.

The grandest feature of this province, however, consists in its ancient remains, which far surpass any that are to be found in the northern capitals. Thirty miles to the north of Shiraz are found the remains of the palace of Persepolis (*fig.* 585.), one of the most magnificent structures which art ever reared. Its front is 600 paces in length, and the side 390 paces. The architecture is in a peculiar style, but remarkable for correct proportions and beautiful execution. The staircases leading into the interior are peculiarly extensive and magnificent. The portals and the capitals of the columns are adorned with numerous figures in basso-relievo, representing combats and processions of various kinds. The drawing of the

figures is correct; but as only their contour is represented, without any of the prominences and details, they present a heavy appearance, and cannot rival the great works of Grecian sculpture.

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Persepolis.

A few miles to the north of Persepolis we discover a remarkable feature, the excavated hill of *Nakshi Roustan* (*fig.* 586.). It is about 300 yards high, and presents a precipitous face of whitish marble, nearly the whole of which is covered with sculptured tombs. The four highest are in a superior style of execution, apparently coeval with Persepolis, and belonging to the early kings of Persia. The lower tombs appear to belong to the Parthian Sassanide dynasties, and represent their wars with the Romans and Tartars. Near Murgab, ninety miles north of Persepolis, are two remarkable objects. One of them, called Tuckt-y-Sulieman, consists of a large marble structure raised in the face of a hill, and forming a platform at top. It is supposed to mark the site of Pasagardæ, the city of the Magi, for the celebration of whose rites the platform appears to have been raised. The other, called Madre-y-Sulieman, for the Asiatics ascribe every thing to Solomon, appears proved to be the tomb of Cyrus. A large flight of marble steps rises to the tomb itself, which is in the form of a house.

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Nakshi Roustan.

At the end of the long valley in which Kazeroon is situated are found the magnificent remains of Shahpoor, founded before the time of Alexander, but restored and embellished by Sapor the Great. It lies in a wild romantic spot, on the banks of a rapid river, amid rocks and precipices. Several of these rocks are covered with sculptured monuments, representing the triumphs of the second founder of Shahpoor. His colossal statue, fifteen feet six inches long, lying on a cavern, has been recently described by Ouseley. The circuit of the ramparts, and the remains of several public buildings, may still be traced.

To the south of Fars is the small maritime province of Lar. The interior is extremely arid, producing only dates, with a small quantity of grain. Lar, however, was once a magnificent city, though now much decayed; and Jaron, though poor, carries on a considerable inland trade. The sea-ports are now in the hands of the Arabs, who combine trade and piracy. The largest sea-port is Congoon.

To the east of Fars is the province of Kerman, presenting arid mountains, and interspersed with extensive tracts of desert; but in others capable of high cultivation. Its hilly tracts are distinguished by a species of goats with hair, or rather wool, of peculiar fineness. Kerman, the capital, was one of the proudest cities in the empire, till, in the course of the civil wars, having afforded shelter to a pretender to the throne, it was taken and destroyed by Aga Mohammed. From this blow it has never recovered, though it still retains considerable trade and population, and is celebrated for its manufacture of shawls and carpets. Bumm, an important city, also decayed, and Regan, a neat little town, are both situated on the eastern frontier, and strongly fortified. On the sea-coast this province has Gombroon, which Shah Abbas, after destroying Ormus, rendered the emporium of Persian commerce. It now belongs to the Imam of Muscat, and, with Minab, a large fortified sea-port to the east, yields customs to the amount of 20,000 rupees annually. Opposite to Gombroon is Ormus, no longer the seat of that vast commerce which, in the days of Albuquerque, rendered it one of the most splendid cities of the East. When it came into the hands of the Imam it did not contain twenty houses, but he has in some degree restored it. Every thing of the old city is in ruins except the reservoirs. Adjoining is the large and fertile island of Kishme, containing a town of some magnitude.

As Kerman forms the eastern, Khuzistan forms the western portion of Persia. This province exhibits a complete contrast to that aridity which dooms so great a portion of the kingdom to barrenness. It is watered by several fine rivers, the Kerah, or Haweeza, the Karoon, the Teraki, and the Endian, which fall into the Tigris and the Persian Gulf. With these advantages it might regain the distinction, which it formerly enjoyed under the name of Susiana, of being one of the most fertile regions in the world, were it not entirely laid waste by anarchy and misrule. The southern and maritime part belongs to the chief sheik, an Arabian prince, whose capital is at Dorak. The Persian part, called Shuster, is under a governor, whose power, however, is insufficient to restrain the predatory tribes and independent chiefs, who make this country a scene of perpetual confusion. The capital, Shuster, is a place of some importance, containing considerable woollen manufactures. On its site are extensive ruins, which have been supposed to be those of Susa; but these have, with greater probability, been traced to a spot called Shus, on the upper Kerah, where, for a space of twelve miles in length, the ground, as at Babylon, is covered with hillocks of earth, rubbish, and broken bricks. It is now a gloomy wilderness, infested by lions, hyenas, and other beasts of prey. The desolation of this fine province is strongly marked by the ruins of Ahwaz on the Karoon, which, under the protection afforded by the powerful dynasty of the Abbassides, became one of the greatest cities of the East. The water of the river was almost entirely employed to irrigate the surrounding country, which, now overgrown with wood, was then covered with the richest plantations. The site, ten or twelve miles in length, and half that breadth, is covered with vast mounds of bricks and rubbish, and of which Captain Mignan conceives there might be built as large a city as any that now exists. The inhabitants of the modern village, about 1600 in number, on searching the ruins after a fall of rain, seldom fail to discover gold and silver coins, medals, and sculptures.

Besides these provinces, belonging entirely to Persia, there are two which she divides with Turkey, and which have long formed the theatre of contest between the empires. One of these is Coordistan, the ancient Carduchia, inhabited by a brave, hospitable, fierce, and turbulent race; who are described as such by Xenophon, and appear never to have been changed or thoroughly subdued. The eastern part, called Ardelan, is, in so far, subject to the Persian monarch, that the inhabitants pay a small tribute, and are ever ready, at his call, to engage in their favourite pursuits of war and plunder. The country consists entirely of ranges of rocky mountains and high table-lands, traversed by difficult and often perilous routes. They are governed in a despotic but mild manner by hereditary chiefs. The principal of these, called the Wallee, resides at Senna, the only town of much importance, situated in a fine valley, and carrying on some trade.

Another divided province, long a theatre of contest between the East and the West, is the ancient kingdom of Armenia. The lofty mountains of Western Asia have their central place in this region. As, however, it contains numerous valleys, watered by the early streams of the Euphrates, the Tigris, and the Araxes, it is well adapted for cultivation. A great part of it, however, having long been the theatre of constant war between Persia, Russia, and Turkey, has become a vast depopulated wilderness, and presents the remains of cities, towns, and villages, that belonged to a flourishing people, now swept from the face of the earth; a border land or high road, through which the Asiatic powers pass in open war or predatory hostility. For three centuries, however, Erzeroum, Diarbekir, with the finest and most fertile tracts, have belonged to Turkey. In the Persian division, the chief town is now Erivan, a strong fortress, situated on a precipitous rock, over the river Tergui. In 1808, the Russians were driven from it after a blockade of six months; but the repeated sieges sustained by it have greatly impaired the prosperity of Erivan. Fifty miles distant are the remains of Nakshivan, an ancient and magnificent city, now reduced to a heap of ruins. Near this spot the Persian camp is usually pitched in the campaigns against Russia.*

CHAPTER V.

INDEPENDENT PERSIA.

The large region to which we have given the name of Independent Persia, forms rather an aggregate of various territories than a distinct or connected kingdom. For the reasons already given, we have separated it from the empire of Persia, and have included in it the provinces of Seistan and Mekran, which never formed any regular part of that empire.

* [Erivan and Nakshivan now belong to Russia.—Am. Ed.]

Cabul, till lately the seat of the only important monarchy in this region, has been very commonly considered as a province of Hindostan; and, indeed, the cities of Cabul and Ghizni were the residence of celebrated dynasties which reigned over that empire: but its moral and physical character is entirely distinct, and the ties which unite them are altogether precarious. The kingdom of Cabul is now dismembered, and a great part of it is in the possession of Runjeet Sing, the Seik ruler; yet the Indus forms too natural a boundary to be superseded by any temporary changes of this nature. For the same reason, though Ahmed Shah held sway over Balkh, the mountains form still the natural limit between Independent Persia and Tartary.

SECT. I.—*General Outline and Aspect.*

Upon the principles above stated, Independent Persia will be comprehended within the marked natural boundaries formed by the mighty chain of Caucasus, or Hindoo Koosh, on the north; by the Indus on the east; the Indian Ocean on the south; and, on the west, by a winding line drawn along the desert boundaries of Kerman and Khorasan. It will thus, in a general view, be included within the 57th and 71st degrees of east longitude, and the 25th and 36th of north latitude. It forms nearly a square of about 800 miles in length and 700 in breadth.

This region presents a sort of compound of Persia and Arabia; on the north, vast mountains, high table-lands, and rapid rivers; on the south, sandy and salt deserts. The most conspicuous feature is that grand mountain chain, continued from the snowy range of Hindostan, which forms the whole of its northern boundary. Though its height does not equal that of the loftiest peaks of the Himalayah, it is yet truly amazing, and scarcely exceeded in any other region of the globe. One point, the most elevated yet observed, has been stated to reach 20,593 feet. Its summits, though only in the 34th degree of latitude, are covered with perpetual snow; and being seen at once from the whole extent of this region, form, as it were, a bond of connexion between the various nations by which it is peopled. From numerous accounts, not yet perhaps very accurately combined, it is supposed to extend without interruption westward till it locks in with Mount Elburz, and thus connects itself with Taurus and Russian Caucasus. That part which rises above the plain of Cabul is, from a peculiarly elevated peak, called generally Hindoo Koosh, or Hindoo Koh. In its progress westward, it takes, or at least it received from the ancients, the name of Paropamisus. Here its elevation is considerably less, and it is not covered with perpetual snow. Ranges proceeding from this main one, or connected with it, traverse in every direction the territory of Cabul and Candahar. Of these the most important is that of Solimaun, which runs parallel to the Indus, and nearly at right angles with the Hindoo Koosh, leaving behind them, near its highest peak of Suffaid Koh, only a narrow pass, through which flows the Kama. The intervening territories are to be considered not properly as plains, but as elevated table-lands, yielding the products rather of the temperate than of the tropical climates. The southern regions, Seistan, Beloochistan, and Mekran, consist partly of rugged mountains of inferior elevation; partly of vast deserts which are equally dreary with those of Africa and Arabia, and of which the sands, being blown into waves, oppose greater obstruction to the traveller.

The rivers of Eastern Persia, unless we include among them the limitary stream of the Indus, are not of the first magnitude. The Kama rises beyond its limits in the territory of Cashgar, and, after crossing the Hindoo Koosh, and receiving the river of Cabul, which rises in the southern part of that chain, falls into the Indus at Attock. The Heermund or Helmund derives its origin from a source not far from that of the Cabul; it traverses the plain of Candahar, and, giving some degree of fertility to the arid plains of Seistan, terminates by forming the salt lake of Zerrah, or Zurrah. It must have flowed then nearly 600 miles. The mountain tracts in the south give rise to numerous rivers, or rather torrents, nearly dry in summer, but rapid and desolating in winter.

SECT. II.—*Natural Geography.*

The Geology of this region has not yet been explored; and its Zoology does not differ from that of the Persian empire. The following remarks occur in relation to its Botany.

SUBSECT. — *Botany.*

This country, which extends from the extremity of the Himalayah mountains to the western frontier of Beloochistan, and from the mouth of the Indus to the shores of the Oxus, is very little known. The famous districts of Cashmere, Cabul, and Candahar find more place in the marvellous tales of Arabian writers than they do in the more dry and learned disquisitions of European naturalists.

The southern part of the great desert is not so sterile but that traces of the vegetation of hot countries may be perceived. Here and there, among the drifted sands which heave like the waves of the ocean, grow scattered tufts of dry plants, and bushes of Mimosa and Zizyphus. The Holcus spicatus (*fig.* 587.) is cultivated round some lonely huts; and it is a circumstance worthy of remark, that the inhabitants of these wild abodes are obliged, in their search for water, to dig to a depth of 300 feet, in a soil whose arid surface produces, without any cultivation, Water Melons more than a foot in diameter. The rivers Setuleje, Chunab, and Indus, diffuse fertility along their shores in the very heart of this desert.

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Holcus Spicatus.

At its eastern extremity is the province of Sinde, of which the southern part, bathed by the sea of Oman to the westward, descends to the tropics. The shore presents a large level plain, which is intersected by the Indus, and the various channels which convey the waters of that river to the sea. The shores of this fine stream are remarkably fertile; but so soon as the traveller goes to a short distance from them, he finds on one hand the desert, and on the other a range of bare mountains, that offer a striking resemblance to Egypt, as is remarked by Pottinger. At Tattah (lat. 24° 44′), this traveller remarks that, from the middle of June to the middle of July, 1810, the thermometer, in the coolest apartments, never fell lower than from + 38° to + 33°; and that at Hyderabad (lat. 25° 22′), in August, the rainy season, it rarely sank below + 38°. Among the plants of this country, we can only point out the Mimosas, the Tamarix, and the Euphorbia antiquorum (*fig.* 588.). The same may be said of Seistan, reputed to be the warmest province of the empire.

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Euphorbia Antiquorum.

The annual temperature of the shores of Beloochistan must be inferior to that of Sinde, because the year is there clearly divided into two seasons, the warm and the cold; but it is requisite to observe, that this latter season only appears cold when compared with the excessive heats of the former. The soil is only fertile where it is irrigated, and elsewhere is as sandy as the desert. It produces the Date, the Pride of India (*Melia Azedarach*), the Banyan (*Ficus religiosa*), the Dalbergia Sissoo, the Mango (*Mangifera indica*), the Tamarind, the Zizyphus, and some Mimosas of considerable stature: the Walnut, the Sycamore, and the Oriental Plane, succeed very well: Ashes, Oaks, and Firs, with the other Coniferæ, are unknown. At a very short distance from the coast, the country becomes mountainous, and the temperature varies with the inequalities of the soil. In the low and favourably situated valleys, between lat. 27° and 30°, grow the Date, the Guava, the Banana, the Fig, the Pistachio, the Mulberry, the Pomegranate, the Vine, the Walnut, the Quince, the Peach, the Apricot, the Almond, the Cherry, and the Currant. Rice, Cotton, and Indigo are cultivated on the plains; but on the slopes and declivities of the hills, where long winters and severe frosts are experienced, they can hardly reckon with certainty on a slender harvest of wheat and barley; so tardy is the ripening of grain. The ground brings forth spontaneously Mimosa, Tamarix, Hedysarum Alhagi, and Assa-fœtida.

Turning towards the north-west, we enter on the desert of Kerman; a burning, arid, and saline sand, quite destitute of vegetation. In the centre of this vast and dreary solitude, some springs of fresh water irrigate the little oasis of Khubbees, which gladdens the traveller with the sight of its hospitable roofs, its perennial verdure, and its cooling shade.

The whole of this empire, from the desert of Kerman to the western declivities of the Himalayah mountains, and from the desert of the south to the Indian Caucasus, and the Paropamisan range, must be included in the Transition Zone, though the accidents of soil often obliterate its distinctive features. Between lat. 30° and 33°, the flat and low districts enjoy a very hot summer, and a remarkably mild winter. Sometimes, in the latter season, a thin coating of ice is formed, during the night, on the surface of still waters and the brink of rivers; but it dissolves at sunrise. Frequently there is a fall of snow in the western districts, but it is never seen at Candahar (lat. 33°). At a considerable distance from this city, to the south-east, in the fertile plains of Moultan (lat. 30° 50′), shaded by the Date, the Melia Azedarach, and the Banyan, Elphinstone remarked, in December, 1809, that the thermometer fell in the morning to —2° 2′. All the country which stretches from the left bank of the Indus to the Himalayah, and to the southern mountains of Cashmere, enjoys a climate that is warm enough to ripen the fruits of India. The Plane and the Willow become rarer as the latitudes are more low.

To the north, Cashmere (lat. 34° to 35°), enclosed between two chains of mountains, whose lofty summits are clothed with perpetual snow, has a cold winter, and a moderately warm summer. Of all the Indian trees, the Mulberry alone succeeds; the fruits of Europe and of the north of Asia Minor, such as Wheat, Barley, and Rice, are cultivated. The

mountains are covered with Pine and Fir, particularly on their northern sides; the rivers are fringed with Willows, and the adjacent plains, near the inhabited parts, are adorned with Poplars.

The valley of the Indus divides the chain of northern mountains of Cashmere from the Indian Caucasus, which stretches from east to west, and terminates at the commencement of the Paropamisan mountains. Its crest, of which some of the summits attain a height of 3000 toises, is always covered with snow. The lower ranges are skirted with forests of Lentisks (*fig.* 589.), Pistachio trees, Olives, Oaks, Firs, Pines, &c. In the low valleys grow a multitude of plants belonging to the same genera as those of Europe.

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Lentisk.

To the south of the Indian Caucasus, and not far from its base, in the valley intersected by the Punjsheer, are two famous towns, Cabul and Peshawer. The latter (lat. 34°), situated in the centre of a little low plain, surrounded by mountains, owes probably to this locality the excessive heat of its summer and the moderate cold of its winter. Elphinstone reckons, by memory, the *maximum* heat of the summer of 1809, which was considered as temperate, at + 49°. Frequently the thermometer indicated + 45°, under a tent that was kept artificially cool. During winter, frost is frequent in in the night and morning; the *minimum* is —3° 88′: during the daytime the atmosphere becomes warmer, and the air is very mild. Few localities are so favourable to the combination of the vegetables both of warm and temperate climates. The atmosphere, which is generally mild when it is not very hot, and the soil, that is constantly watered by numerous rivers, keep up a vigorous and varied vegetation. Thick grass, whose verdure, during most of the year, rivals that of the meadows of the north, covers the uncultivated spots. The banks of the rivers are fringed with Willows and Tamarisks, thirty or forty feet high. The villages can scarcely be discerned through the fruit-trees which environ them. The Pomegranate, the Mulberry, the Banyan, the Date, the Orange, and some other Indian trees, which retain their foliage at Peshawer all the winter, mingle with all the species that our orchards afford. The avenues to the town are bordered with Cypress and Planes.

At Cabul, where the summers are not so hot, and the winters, without being severe, are colder, and accompanied with frequent falls of snow, the fruit-trees of Hindostan are not seen, while those of Europe abound. The emperor Baber caused the Sugar-cane to be planted, but it is not probable that it would succeed.

We must not omit the central part of the empire. It is raised, so to speak, by several chains of mountains, which, like the rays of a circle, springing from different points, meet at a common centre. The farther these chains advance into the country, the higher do the valleys become, and the more, consequently, does the temperature decline. Between the parallels of 32° and 34°, there are summers hardly warmer than those of England; and winters which, if not so severe as those of Norway, are equally subject to frost. The snow lies for three or four months; all the rivers are frozen, so that men on horseback, and camels loaded with baggage, can cross upon the ice. It is said that the plain of Ghazni (lat. 33° 30′), which is a part of the central table-land, is the coldest spot in the kingdom.

Few Indian plants inhabit Cabulistan, while those of Europe are in great abundance there. The Vine, the Peach (*fig.* 590.) and Apricot (*fig.* 591.), &c. grow wild, and seem as in-

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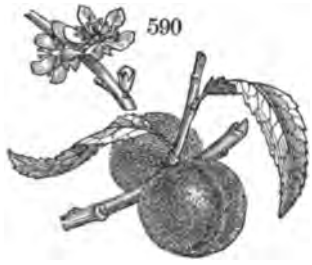

Peach

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Apricot.

digenous as in Asia Minor. The prevailing trees on the mountains are various species of Pinus, one of which bears cones as large as artichokes, and seeds as big as pistachio nuts. It is probably the Stone Pine (*Pinus Pinea*). There are likewise Cedars, a Cypress of prodigious height, and several kinds of Oak. The Walnut, Pistachio, and Terebinth also inhabit the mountains. Elphinstone thinks, too, that he remembers having seen the Holly, the Birch, and the Nut (*Corylus Avellana*) On the uncultivated plains, the commonest

trees are the Mulberry, the Tamarind, the Plane, the Poplar, and several sorts of Willow. The culture of Sugar-canes, Cotton, Indigo, Melons; of Sorghum spicatum and S. vulgare; of Sesame (*Sesamum orientale*), and of Rice, is not unusual in the warmer districts. That of Wheat, Barley, Maize, Beet, Carrot, and many other kitchen vegetables, is prevalent, wherever there is little industry, combined with a productive soil.

These vague and incomplete accounts rather awaken than satisfy our curiosity. Indeed, the Flora of the empire of Cabul is even less known to us than that of China.

Before passing into Persia, we must say a few words on the countries which extend to the west and north-west, from the Paropamisan mountains to lat. 41°, and which comprehend the districts of Balkh, Mauer el Nahr, Bokhara, Khorasan, &c. Already the climate is too cold for the growth of the Olive; but a great number of the woody vegetables which are found along with it in the Transition Zone may be seen, either wild or cultivated, according to the localities. These districts present a curious assemblage of plains and mountains; of steppes which are grassy or arid, sandy, sterile, or frequently saline; of bad soil, and of remarkably fertile land. In the cold season, the water is all frozen, and caravans cross the rivers on the ice. In the winter of 1820–1, the Baron Meyendorff, who was sent from the court of Russia to Bokhara, saw the thermometer fall there to twelve or thirteen degrees below zero, though the season was in general very mild. The heat of summer compensates the cold of winter; the former is so intense and prolonged, that it dries up almost all the water-courses.

The provinces of Herat, Dheï, Molla, Khiva, Bokhara, Samarcand, &c. environed by deserts, resemble the lovely oases of Egypt. Nowhere is the population more numerous, the cultivation more careful, and vegetation more productive. The gardens and orchards, which are very frequent, contain a great quantity of fruit-trees, among which the Pomegranate, the Pistachio, and the Fig afford most delicious fruits. There are large plantations of the White Mulberry (*Morus alba*) (*fig.* 592.), and the Tartarian Mulberry (*M. Tatarica*). Cotton, Indigo, Sesame, Sorghum saccharatum, Rice, and all the European grains and vegetables, are cultivated.

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White Mulberry.

According to Falk, the common trees and shrubs of Bokhara are the Terebinth tree (*Pistachia terebinthus*), Eleægnus angustifolius, Ulmus campestris and effusa, the Whitethorn (*Cratægus Oxyacantha*), Pyrus, Aria and Aucuparia, Mespilus Cotoneaster, Spiræa crenata, Rosa pimpinellifolia, the Caperbush (*Capparis spinosa*), Clematis orientalis, the Birch (*Betula alba*), the Poplar (*Populus alba*), &c.

The steppes produce in abundance the Tamarix, the Almond (*Amygdalus nana*), the Calligonum polygonoides, and a tree of low growth which has caducous leaves, like those of the Larch, and which Falk supposes to be the Abies orientalis, and Pallas the Juniperus lycia, or the Savin (*Juniperus Sabina*).

In the southern parts of Bokhara, the Oriental Plane (*Platanus orientalis*) becomes a tree of colossal growth.

Sect. III.—*Historical Geography.*

This region was very little known or regarded by the ancients. Under the names of Arachosia, Paropamisus, Drangiana, and Gedrosia, it was regarded as a rude, barbarous, and impracticable tract. The route to India and the East was through Aria (the bordering part of Khorasan) and Bactria on the south of Hindoo Koosh. It was chiefly known by the expedition of Alexander, who, in entering India from the side of Bactria, was obliged to penetrate through the defiles of Cabul, and who, in returning by the southern deserts of Gedrosia, encountered obstacles of the most formidable character. In modern times, Independent Persia has acted a prominent part in the revolutions of Asia. In the eleventh century, Mahmood of Ghizni made that city the capital of an empire which extended to the extremities of Persia and India. His dynasty was crushed before the victorious invasions of Zingis and Timur; and Cabul was comprehended with Hindostan under the Mogul empire. The city of that name became a Mogul capital, and was the favourite residence of Baber, one of the greatest monarchs of that race. When the empire fell to pieces, the hardy population of Cabul was not slow in re-asserting its independence; and towards the commencement of the last century they became the conquerors and the desolators of Persia. Nadir, however, a Persian adventurer, drove out the Afghans, subdued them in their turn, and carried his arms into Hindostan. On Nadir's death, his kingdom fell to pieces; and Ahmed Shah, a brave Afghan chief, seized the opportunity to render his country independent, and himself its king. He also invaded India, and in the battle of Panniput broke the power of the Mahrattas, who were about to seize the fallen sceptre of the Mogul. His successes enabled him to appropriate the finest provinces of Western India, Lahore, Moultan, and Cashmere, to which he added Balkh. The kingdom of Cabul became one of the most powerful in Asia; but since the death of Ahmed Shah, it has been broken up by the dissensions among his family, and

the power of Runjeet Sing, who has occupied several of its finest provinces. Its limits do not now extend beyond Afghanistan Proper.

SECT. IV.—*Political Geography.*

The political constitution of Cabul exhibits peculiarities which distinguish it from that of almost every other Asiatic monarchy. Instead of the power being monopolised by the sovereign, or at least by the khans, with no check but the influence of rival chiefs, it admits a large infusion of popular elements. In every *ooloos*, or tribe, there is a *jeerga*, or representative assembly, without whose consent the khan can undertake nothing, and who also administer justice, though in some subserviency to the rooted principle of private vengeance. Among the people, much more attachment is felt to the jeerga than to the khan. These tribes may be said to form independent states, and they even carry on war with each other. Their only vassalage to the king consists in a tribute, and a contingent of troops in war; both which, especially the former, are with difficulty exacted. In the large cities and their vicinity the authority of the sovereign is much more extensive; but the rude and desert tracts to the south are abandoned to independent chiefs or lawless banditti.

Among the Afghan tribes great reverence is paid to birth, and particularly to antiquity of descent. The khan must be taken out of the oldest family in the tribe; but the king either appoints him, or at least has great influence in procuring his appointment. The two leading tribes are the Ghiljies and the Dooraunees: of whom the former are the rudest, the fiercest, and the most warlike; the latter are more orderly and peaceable, and in all respects of a superior character. The Ghiljies were the conquerors of Persia; but Ahmed Shah belonged to the Dooraunee tribe, which became, therefore, the ruling one. At this ascendency the Ghiljies cherished mortal resentment; and, indeed, the antipathy between the two tribes is such that it is with difficulty restrained from breaking into open war.

The revenues of the kingdom of Cabul arise from the land-tax, the tributes paid by vassal chiefs, the royal demesnes, and some minor sources. A considerable proportion, however, must often be remitted to the tributary princes, who, if they did not receive this remission as a grant, would be in danger of rebelling against the power which should persist in exacting the full amount.

The military force, or at least the most regular and efficient part of it, consists of Gholaums, a body formed partly of military adventurers, partly of persons holding lands or grants on a military tenure in and around the great cities. They form a well-disciplined and disposable army, about 13,000 strong. The Dooraunees are easily mustered, to the amount of 12,000 brave highland militia, each fighting under the banner of his own chieftain. The contingents of the other tribes amount collectively to a much greater number; but they are drawn out with great difficulty, unless for local purposes, or with a peculiar hope of plunder. The entire force commanded by Ahmed Shah, in the battle of Panniput, was estimated at 40,000 men, which, perhaps, may be nearly as large an army as can be levied from the country for a foreign expedition.

SECT. V.—*Productive Industry.*

A very great portion of this vast region is doomed to complete and irremediable barrenness, produced by the opposite extremes of lofty and snow-covered mountains, and of sandy plains. Other portions, however, of considerable extent, bear quite an opposite character. The lower declivities of the mountains, and the high plains interspersed between them, though they do not offer the profuse products that cover the plains of Delhi and Ispahan, are often equal to the finest parts of Europe. Nor are these natural advantages neglected by a rough but active and laborious people. Irrigation, as in all tropical countries, forms the most important and arduous part of husbandry. It is attended here with peculiar difficulties; the water from the heights being apt to run over its slopes in destructive torrents rather than in fertilising rills. To remedy this evil, it is not only necessary by canals to lead the water through the fields, but by levelling and embankment to retain it. A remarkable process is employed, by which the water of a number of wells is collected together, and distributed over a field. Extensive operations of this kind are more difficult, from the small portions into which the occupancy of land is here divided. They are sometimes performed by an association among the little proprietors; sometimes by a rich man employing his capital on this object. Wheat and barley, instead of rice, are the principal species of grain; the first for the food of man, the latter for that of horses. Fruits and vegetables are produced in such abundance, that their cheapness is almost unequalled.

The people have not extended their industry to manufactures, except those of coarse fabric for internal consumption. The kingdom of Cabul, by its situation, is excluded from maritime commerce; and the coast of Mekran is too poor to make much use of its natural advantages in this respect. The country, however, carries on a considerable inland trade within its own provinces, with the neighbouring countries, and also as a thoroughfare between Persia and India. This traffic is conducted by caravans, which employ camels where the route is practicable for them, but in the rough mountain roads of Afghanistan horses and ponies are sub-

stituted. These caravans journey under continual dread of the predatory tribes, which infest almost every part of this country. Above all, in passing through the territories occupied by them, the strictest precautions become necessary. The best parts of Eastern Persia produce rather the simple necessaries of life, than those superfluities which can become the objects of exchange. Fruits, assafœtida, madder, and a few furs, form the principal articles. In return, they receive the manufactures of Persia and India, and even those of Europe, by way of Orenburg and Bokhara.

Sect. VI.—*Civil and Social State.*

Mr. Elphinstone gives the following conjectural estimate of the population of the kingdom of Cabul:—

Afghans	4,300,000
Beloochees	1,000,000
Tartars	1,200,000
Persians	1,500,000
	8,000,000

This estimate, besides the main body of the kingdom, includes, we presume, Balkh and the subject part of Khorasan, but not the Indian provinces of Cashmere and the Punjab, to which are assigned a population of about 3,000,000.

The Afghans (*fig.* 593.), who form the main body of the population, present, in their aspect and character, a very striking contrast to the Hindoos, on whom they immediately border. Their high and even harsh features, their sunburnt countenances, their long beards, loose garments, and shaggy mantles of skins, give the idea of a much ruder and more unpolished people. The arts of life are less advanced, and many of the luxuries of Hindostan unknown: there is nothing like the same organised police and regular course of justice. Under this rough exterior, however, are soon disclosed estimable qualities, which advantageously contrast with the timid servility produced by long subjection in the Indian. Their martial and lofty spirit, their bold and simple manners, their sobriety and contempt of pleasure, their unbounded hospitality, and the general energy and independence of their character, render them on the whole a superior race. In India, every movement originates with the government or its agents, and the people are accounted as nothing; while here, men put themselves little under control, and follow undisturbed their own inclinations. Although Asiatic dissimulation prevails, especially at court, yet their intercourse is by no means marked by that profound and systematic deceit which characterises the subjects of the great empires. They show also an active curiosity with regard to the products of European art and skill, with an eager disposition to enquire into the processes employed; while in India all these things are regarded with a mere polite indifference. Although polygamy and the obtaining of wives by purchase are equally established, yet the former is not carried to the same extent, nor attended with the same strict seclusion; and hence the degradation of the female sex, which is the necessary consequence of such arrangements, does not take place in a degree so remarkable. Matrimonial contracts are not, as usual in Mahometan countries, negotiated entirely by the friends of the parties; but in the country districts especially, the parties themselves have often the opportunity of meeting and forming attachments. These cannot be fulfilled, indeed, until the youth has earned the purchase-money of his mistress; but though this be in itself far from a romantic feature, it gives rise to delays and difficulties, which often impart a character of interest and adventure to the connexion. It has thus become the subject of love-tales somewhat similar to those which are popular in Europe. This pecuniary value of the female sex, and difficulty of purchase, have led to very odd species of penal infliction. The offender, on being convicted, is sentenced to pay to the injured person or his friends, a number of young women, proportioned to the enormity of the offence. Twelve ladies form the fine for murder; in minor offences, the amount is of course diminished.

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Afghan.

The established religion, in Afghanistan, is strictly Mahometan, though toleration prevails more than even in the Persian empire, where it has been observed to be greater than usual in Mussulman countries. As in other Mahometan states, no established provision is made for the priesthood. The mollahs, or religious doctors, are solely supported by individual donation, whether in the shape of permanent foundation, regular salary, or occasional gift. They form, however, a species of corporate body, called the ulema, who admit new members, after a due course of study and a strict examination. They are numerous, and often assert their rights in that turbulent manner which characterises the nation. They take arms, and in the neighbourhood of the great cities muster sometimes hosts of 2000 or 3000, who, though they cannot match the prowess of the Afghan warriors, are so aided by the superstitious awe of the multitude as generally to carry their point. In the rural districts

their character is more respectable; and by promoting peace and inculcating the moral duties, they render themselves really useful to this rude people.

A taste for knowledge is general among the Afghans, though they have not produced any writers who can rival in fame those of Persia and India. Few of the works in the language, indeed, are above two centuries old, and they are evidently imitations of the Persian. The late sovereigns of Cabul have sought to promote learning, and even cultivated the muses, though not with any brilliant success. Unfortunately, the Afghans, considering the Persians as heretics, guard against resorting to their colleges. Peshawer enjoys the highest reputation in the country, and a considerable number resort to Bokhara. There are, besides, schools in every little town and even village, so that the first elements of knowledge are very widely diffused. The higher branches are logic, law, and theology, to which are added the Persian and Arabic languages and literature. Study, in the Mahometan countries, proceeds in a fixed and invariable course; so that, when you know the last book a man has read, or the last subject he has studied, you know all that has gone before it, and all that is still wanting. The taste for poetry is very general, and a considerable number of people in the towns even make the public reading of it a distinct employment. The poets by profession are not to be compared with those of Persia; but a considerable display of genius often appears in the rude verses of the chiefs and warriors, who celebrate their own feelings and adventures. Those of Kooshkaul, a khan who defended his native country against the power of Aurungzebe, display a peculiar degree of poetic fire.

Afghanistan has a language peculiar to itself, called Pooshtoo. About half the terms, including all those of an abstract import, were traced by Mr. Elphinstone to foreign sources, chiefly the Persian. The rest appear to belong to an unknown root, though it is admitted that of these a careful examination by a profound oriental scholar might diminish the number.

The inhabitants of Afghanistan are formed into two great divisions,—of dwellers in tents, and dwellers in houses. The former, in the western part of the kingdom, are supposed to constitute one half of the population; in the eastern they are fewer, but still very numerous. The Afghans have generally a strong attachment to the pastoral life, and are with difficulty induced to quit it. Contrary to the ideas which prevail in Europe, they hold in disdain a residence in towns, together with the occupations there carried on, and leave them to inferior and foreign races. The most numerous of these are the Tanjiks, who have been supposed to amount to 1,500,000, and to be the original people subdued by the Afghans, who regard them as inferiors. They inhabit the towns and their vicinity, and carry on those trades which are disdained by the ruling people. The fixed habitations of the lower orders are rudely constructed of unburnt brick, with wooden roofs. The palaces of the great are on the Persian model, though in an inferior style of magnificence; their chief ornaments are Persian pictures and carpets.

The Afghans are fond of all sorts of boisterous amusements, particularly those which involve great display of bodily activity. Hunting is as it were the rage over all Afghanistan, and the people pursue it not only in all the known and usual modes, but in others, peculiar to the country itself. Sometimes a whole neighbourhood assembled forms a circle, and sweeps together within it all the game belonging to a certain district. In the villages much delight is taken in the attum, a hearty and noisy dance, consisting in violent movements, in which both sexes join. They delight in the fighting of quails, cocks, and other animals; and they amuse themselves at marbles, hopping on one foot, and other games considered in Europe as suited only to children.

The Afghan dress presents a striking contrast with the Indian attire of light, loose, flying robes, leaving a great part of the body naked. It consists of close tunics and wide mantles, composed, among the lower ranks, of sheepskin or coarse woollen cloth; among the higher, of velvet, fine shawl-cloth, or silk. Boots are almost universally worn, and no one is allowed to appear at court without them. Jewels are chiefly employed to decorate their armour. The favourite dress of the ladies consists of jackets, somewhat similar to those of dragoons, and pantaloons, both composed of velvet, shawl-cloth, or silk. Strings of Venetian sequins, chains of gold and silver, and ear-rings, are the most valued ornaments.

Although the Afghans are a sober and temperate people, they are enabled to live well, by the extreme cheapness of all provisions, particularly fruit and vegetables. They are also social and hospitable; and even the poorer classes, when they can afford to kill a sheep, invite some neighbours to partake. The dishes are merely the mutton with the broth in which it has been boiled; the drink is butter-milk, or sherbet; and conviviality is chiefly promoted by the use of tobacco. At the tables of the great, rich pilaus, and dishes variously dressed, are presented on trays, after the Persian manner, and ornamented with gold and silver leaf. The Afghans talk a good deal at table, usually in a somewhat grave style, though not without occasional sallies of mirth. One of their favourite amusements consists in walks and collations in the numerous gardens which surround their cities, particularly Cabul, and the views from which are indeed of a peculiarly enchanting description.

Sect. VII.—*Local Geography.*

Afghanistan is divided, like the ancient kingdom of Israel, almost solely according to the tribes who inhabit it. The Berdooraunees are the principal tribe of the eastern Afghanistan; and though they are much inferior to the Ghiljies and Dooraunees, their country derives some importance from its capital, Peshawer, the recent seat of government. Enclosed between the highest ranges of Hindoo Koosh, the Indus, and Solimaun, their whole territory is peculiarly rugged; yet, as it contains many fertile valleys, and is carefully watered and cultivated, it maintains a great population. The Eusofzies, who occupy the north-east corner of this region, present the most complete specimen of the original Afghan rudeness. They hold their present lands by conquest, and distribute them in a very singular manner. As each tribe is split into two independent parts, these have portions assigned to them equal in quantity, but often differing in fertility. To atone for this disparity, they cast lots for their share every ten years, and, in case of obtaining a different one from that actually possessed, an immediate exchange takes place. It is said to be effected with much less of disorder and disadvantage to cultivation than could be expected. The Eusofzies are the most independent of the Afghans, and scarcely own any subordination whatever. The mountaineers, in particular, are excessively rude and ignorant: an instance is given of one of them who, seeing a mollah copying the Koran, struck off his head, saying, "You tell us this is the book of God, and yet you make it yourself." The inhabitants of the plains, on the contrary, are debauched and superstitious.

We shall not dwell on the Turcolaunees, Otmaunkhail, Upper and Lower Momunds, small tribes, though each presents some few peculiarities. From the high peak of Suffaid Koh to the Indus extends a range of rugged mountains with narrow valleys, which, being crossed by the great road from Cabul to Peshawer, affords to the Khyberees, its rude inhabitants, peculiar opportunities for exercising the predatory habits peculiar to this nation. They employ the most vigilant precautions to prevent a single traveller from escaping. Sentries are stationed at all the leading points; and the very sound of the horses' hoofs echoing along the narrow valleys summons them to their prey.

The country extending southward between the range of Solimaun and the Indus is called Damaun. The dress here assimilates more closely to that of Hindostan, being composed of white cotton robes, with wide turbans. The people are more simple and less turbulent than the northern tribes; and though robbers, like the rest, are celebrated for their honesty. The Sheraunees are a numerous tribe. They are peculiarly distinguished by having a Neeka, or magistrate, whom they believe to be in direct communication with the Deity; wherefore they apprehend that disobedience to his will must be attended with awful and immediate calamities. Though indiscriminate plunderers, they are very faithful to those who purchase an escort. The Vizerees inhabit the immediate ridge of Solimaun; an awful region of rocks, torrents, and pine-forests. They have the high features peculiar to mountaineers, are simple in their manners, and are scarcely ever seen out of their own country. Though they make a rule of plundering all who enter it, they allow an easy composition, and faithfully adhere to it; but the tribes whose wanderings alone carry them through this region, being rough and poor like themselves, usually prefer fighting it out.

Peshawer, the only large city in this region, was the capital of the kingdom of Cabul, previous to its late dismemberment. It is situated in a very fertile plain, about thirty-five miles broad, bounded by the loftiest ranges of Hindoo Koosh and Solimaun. This city was occupied by Runjeet Sing, ruler of the Seiks, who, however, did not attempt to retain it, but allows it, with the surrounding district, to be held on payment of a tribute by a chief named Mahommed Khan. This prince has an army of only 3000 horse and 2000 foot, but he can rally under his standard a number of the mountaineer tribes. Peshawer, in consequence of this change, has much declined; and, instead of 100,000 inhabitants, contains scarcely 50,000. The city is rudely built, and its few good public edifices are much decayed; but it presents a picturesque aspect from the varied appearance and costume of the inhabitants of the surrounding mountains, mingled with the natives of India, Persia, and Tartary.

The country of the Ghiljies occupies the central part of the kingdom of Cabul, and forms an irregular parallelogram of about 180 miles by 85. The whole region is elevated and cold, and in its northern parts is overlooked by those lofty peaks which tower above the plain of Peshawer. Its valleys, however, particularly that of Peshawer, are extremely fertile and beautiful. This proud race, who, during successive ages, held sway over Asia, now indignantly endure the supremacy of the Dooraunees, and have even endeavoured to shake it off by recent insurrection. In compensation, however, for the loss of that dominion which they possessed during the early part of the century, they have attained a greater share of domestic independence than they before enjoyed. Their chiefs, being no longer supported by royal influence, are scarcely regarded with any degree of deference, and an almost pure democracy prevails. The military governors, indeed, appointed by the king, successfully exert themselves to collect the revenue, levy the contingents of troops, and, in the immediate neighbourhood of the great cities, maintain a tolerable police; but their power else-

where does not extend to the prevention of individual feuds, or even warfare between tribes in the remote districts.

In this territory is situated Cabul, now the principal city of Afghanistan, and one of the most delightful in the world. Being situated about 6000 feet above the level of the sea, it enjoys a temperate climate, and is surrounded by an extensive plain finely watered by three rivulets. The soil is rather deficient in grain, but produces abundance of forage and a profusion of the most delicious fruits, which are exported to India and other countries. Cabul is a busy bustling city, and its bazaar of 2000 shops is considered almost without a rival in the east. The population is estimated by Mr. Burnes at 60,000. It is governed by Dost Mahommed, brother to the chief of Peshawer, an able and popular prince, and now the most powerful in Afghanistan. He has an army of 9000 well-armed horse, and 2000 infantry.

In this country is situated Ghizni, or Ghuznee, the most celebrated of the cities of Cabul; once the proud capital of the East, where Mahmood reigned and Ferdusi sang, but now comprehended within very narrow limits. It does not contain above 1500 houses; its streets are dark and narrow, and its bazaars by no means spacious. Remains, however, though not quite equal to its fame, attest its former grandeur. The most remarkable are two lofty minarets without the present walls, and the tomb of Mahmood, a spacious but not magnificent building, over which mollahs are perpetually employed in reciting the Koran. Bamean, on the northern slope of the mountains, and bordering on Tartary, is a city cut out of the rock, whose cavern abodes are scattered over a surface of eight miles; and it contains some remarkable temples, with colossal idols.

The western and most extensive portion of the kingdom of Cabul is that occupied by the Dooraunee tribe. Their territory reaches more than half the length of the kingdom. Being bounded, however, on the north by the mountainous tracts of Paropamisus, occupied by the Eimauks and Hazaurehs, and on the south by the sandy plains of Seistan, the region is narrow, seldom equalling, and never exceeding, 140 miles. Although their political constitution generally resembles that of the other tribes, the Dooraunees are under much greater subordination to the king. He even appoints their *sirdars*, or chiefs, though he is obliged to consider somewhat their inclination, and the candidate's place in his tribe. This appointment, and the offices at court, which are bestowed almost exclusively upon the Dooraunee chiefs (*fig.* 594.), enable them to maintain a very considerable power; though, as their importance with the king depends much on the attachment of their adherents, their sway must be mild and conciliatory. It is sufficient, however, to prevent private war; and the valour of the Dooraunees is displayed chiefly in defence of the monarchy, of which they form the main bulwark. Their population is supposed to be from 800,000 to 1,000,000; the great proportion of whom are shepherds, living under tents, and leading a gay, innocent, pastoral life, with frequent festivals, in which preparations of milk and sherbet form the only regale. The agricultural part of the tribe live in small villages, to each of which is attached the castle of a khan, who seems to hold a rank in society somewhat similar to that of the Scottish laird. At one of the gates is always a building set apart for the reception of strangers.

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Dooraunee Chief.

Candahar, the only place of consequence in the Dooraunee territory, is a very ancient city, the foundation of which is ascribed to Alexander the Great. The antiquity, however, belongs chiefly to the site, upon which new towns have been successively erected by different conquerors and potentates. The present was built, about half a century ago, by Ahmed Shah; who even attempted, but with little success, to give it his own name. It is regular and well built, with four long and broad bazaars; but, like other cities, it is not adorned with those magnificent monuments of architecture which mark the capitals of the great empires. One of the mosques, and the tomb of Ahmed Shah, small but elegant, are its only ornaments. This city, with the surrounding country, is now possessed by Cohun Dil Khan, brother to the chiefs of Cabul and Peshawer, who has an army of 9000 horse; but his government is not popular. Kumran, the only representative of the fallen dynasty of Cabul, has now only a precarious hold of Herat and its territory. Ferra, the ancient Parra, is a large walled town, about midway between Candahar and Herat.

The mountainous districts of Paropamisus are inhabited by the Eimauks and Hazaurehs, belonging, perhaps, more properly to Khorasan, or rather to Independent Tartary. The latter, in respect to their general appearance at Peshawer, are described by Mr. Elphinstone as "not more remarkable for their conical caps of skin, with the wool appearing like a fringe round the edge, and for their broad faces and little eyes, than for their want of beard." These features mark them as descended from the Mongols, though it is not very well known how such a race came where they now are. Though subject to the Cabul government, they are in a constant state of petty warfare; each village has a watch-tower to sound the alarm. They are merry, good-humoured, and friendly; but irritable and capricious. They scarcely

differ from the Eimauks, except that the two tribes have adopted with equal zeal the opposite Mahometan creeds.

The south-east corner of the kingdom is occupied by a race called the Caukers, who seem to have few peculiarities. They are rude, but peaceable, and less infected than their neighbours with the predatory spirit. We may conclude our account of the Afghans with noticing the Naussers, a tribe of about 10,000 families, who have no fixed territory or abode whatever. In summer they scatter themselves, and find pasturage in all the high unoccupied tracts throughout the centre of the kingdom. In winter they emigrate to the warm plains of Damaun. To reach these they must cross the ridge of Solimaun, and fight their way through the Vizerees, who have their scouts all on the watch when the period of this grand passage approaches. The Naussers, on their part, appoint an autumn rendezvous on the western side of the Solimaun, all the roads to which are at that season literally choked with the crowds of men, camels, and cattle, hastening to the spot. Having assembled, they set forth, in a close body, with scouts to explore the path, and armed detachments on every side to repel assault. The Vizerees do not attempt any general onset, but merely seize every opportunity of harassing the rear, and cutting off stragglers. The Naussers, though of rude manners, are an honest and peaceable race.

South of the Dooraunee highlands lies the province of Seistan, or Seestaun, traversed by the river Helmund, which, at its western extremity, forms the great lake of Zerrah, or Zurrah, into which flows also the smaller stream of the Furrah. This country, celebrated in Persian story and song as one of the finest regions of the East, exhibits at present a dismal reverse. With the exception of a narrow belt along the banks of the rivers, it consists entirely of sandy and barren plains, over which a few Afghan and Belooch shepherds are seen driving their flocks. Yet the remains of extensive cities, with superb palaces, which the traveller finds at short distances as he journeys along the Helmund, fully exempt the Persian representations concerning this region from the charge of fable. The cause of its decline is obvious, and, perhaps, beyond human power to remedy. This province is encircled on every side by those immense deserts which stretch from the eastern frontier of Persia. The wind, which blows thence for a great part of the year, brings with it clouds of light and shifting sand, which converts the fields into an arid waste, and gradually buries beneath it gardens, houses, and even villages.

The original inhabitants of Seistan are the race already mentioned under the appellation of Taujiks, mixed in the east with a pretty large colony from Beloochistan, and with some other tribes. They are ruled by a number of petty chiefs, who acknowledge a sort of nominal supremacy in one who resides at the capital, called by Elphinstone Jellalabad, and by Kinneir Dooshak. It is a neat city, small but well peopled; and the inhabitants are more polished than those wandering tribes who elsewhere pitch their tents amid the ruins of ancient palaces. The chief claims, truly or falsely, the most august descent in Asia, that from Cyrus; and in the course of the last century his ancestor made an attempt to restore the ancient greatness of his house, and actually conquered a great part of Khorasan. He yielded, however, to the sword of Nadir Shah, and his successor can now with difficulty raise three thousand men. He is subject, moreover, to the king of Cabul, to the extent, at least, of furnishing a tribute and a contingent of troops.

The lake of Zerrah, or Zurrah, has been much famed, and is the only considerable expanse of water in these countries. It is about ninety miles in length and twenty in breadth; but in the dry season it is shallow, and overgrown with reeds, so as to resemble rather a marsh than a lake. The water is brackish, but it abounds with fish and wildfowl. In the centre is a fortified island, where the nobles of Seistan were wont to seek refuge while their country was invaded. About 100 miles to the west, near the frontier, lies Kubbees, a small city, situated in the middle of a vast desert.

The southern part of Independent Persia is generally represented by geographers as forming the Persian province of Mekran, and is equal in extent to the whole of what has now been described. Its districts, however, have no connexion with Persia, and very little with each other. The whole is either abandoned to desolation, or divided among a number of small, fierce, independent, predatory tribes. The northern and inland division, separated from the southern and maritime districts by a high range of mountains, is known by the name of Beloochistan. The whole of its western part is composed of a desert of red moving sand, so light and minute as to be almost impalpable, but which is formed, by the action of the wind, into wave-like ridges of a peculiar structure. One side slopes gradually away, but the other rises perpendicularly, like a brick wall, to a considerable height; and this side the traveller, in order to prosecute his route, must often scale with immense labour. The light sand, filling the eyes, nostrils, and mouth, heightens thirst and irritation; while the phenomenon of mirage causing the appearance of a still lake that is perpetually receding, tantalises him with the always disappointed hope of arriving at water. Mr. Kinneir calculates this desert at 400 miles from south to north, and 200 from east to west; but this last dimension must be doubtful, and seems under-rated.

Eastern Beloochistan is of a very different character. It consists of a huge mass of rugged

and rocky mountains, with intervening valleys, which, however, seldom display that fertile and smiling aspect usual in countries under the tropic, but are in general arid and stony. The streams, when swelled by rain, roll through their beds with such headlong rapidity as quickly to leave them dry, serving as roads or nightly resting-places to the traveller: but the water sometimes rushes down so suddenly as to overwhelm those who have sought this shelter; an accident under which Arrian reports the army of Alexander to have severely suffered. There are patches of good verdure, even capable of cultivation. The best district is the north-eastern land of Cutch Gundava, which affords even a surplus of grain for export. The capital is Kelat, a town of about 4000 houses, supposed to stand on ground 8000 feet above the level of the sea, and, therefore, subject in winter to such intense cold, that the khan and principal chiefs then descend to a lower region. It enjoys, however, a considerable inland trade. It is the residence of a chief, who claims the sovereignty over all Beloochistan, though his real power is nearly confined to the district immediately adjoining. Nooshky, Sarawan, Thalawan, Kharan, are little mud towns, capitals of districts bordering on the desert; but Punjgoor is surrounded by a fertile territory watered by the Baldoo, which, after a considerable course, reaches the Indian Ocean. The Belooche is a brave, hospitable, honourable robber, making *chepaos* or raids of eighty or ninety miles, to burn a village and carry off the inhabitants as slaves, but treating kindly and securing from all harm the stranger who has, or purchases a claim to, his protection. Conjoined with him is the Brahooe, who seems to have been the original possessor, and who, mild, innocent, and pastoral, occupies little villages situated in the bosom of these stupendous mountains.

At the south-eastern corner of Beloochistan is the province of Lus, the seat of the ancient Oritæ, watered by the Pooralee, a flat and fertile region, containing Bayla, a town of 2000 houses, and Somneane, an inconsiderable fishing-town. The upper tracts of this province, however, are inhabited by the Bezunjas, pre-eminent in their rapacious habits, even above the other Belooches, "who care not for king, khan, God, or the prophet; but murder or plunder every person or thing they can lay their hands on." Rumul Khan, the chief of Bayla, however, having pledged his faith to Mr. Pottinger, assured him that "he need not now fear any thing mortal."

The territory between the ocean and the chain of mountains bounding Beloochistan is Mekran Proper, and is very similar to that already described. The mountains, though on a smaller scale, are equally rude and rocky, with arid valleys intervening, traversed by numerous beds of mountain torrents, but occasionally presenting verdant and cultivated spots. Gwutter, Choubar, and Jask are small sea-ports, with some trade, subject or tributary to the Imam of Muscat. Kedje, reckoned the capital of Mekran Proper, is a considerable town in a very strong situation, the chief medium between the sea-coast and the interior countries. It is still held by the khan of Kelat, who has scarcely any other hold upon this country. Bunpoor is a small fortified town near the frontier of Kerman. This western tract of Mekran is infested by banditti called Loories, of a much baser and more brutal character than the usual predatory hordes of Asia. Unlike them, they have renounced every religious belief, and conceiving that men were born to die, to rot, and to be forgotten, not only plunder and murder without scruple, but abandon themselves to every species of depravity. In consequence of this profligacy, scarcely any children are born in the community, and its numbers are recruited almost solely by captives violently carried off from the neighbouring tribes.

CHAPTER VI.

HINDOSTAN.

THE region known to the ancients by the name of India, to the Arabs by that of Al Hind, and now most commonly by the Persian appellation of Hindostan, has always been the most celebrated country of the East. In every age it has been the peculiar seat of Oriental pomp, of an early and peculiar civilisation, and of a commerce supported by richer products than that of any other country, ancient or modern.

SECT. I.—*General Outline and Aspect.*

The nominal limits of Hindostan have varied at different times. In the west, especially, it has sometimes been extended over a great part of Afghanistan, which was often the seat of its ruling potentates. The real Hindostan, however, seems clearly marked both by precise natural boundaries, and by the fixed and deep-seated character of its native population. The boundary on the north, but running in a north-westerly direction, consists of that unbroken and amazing range of mountains, which receives in India the name of Himmaleh, or Himalayah, and separates its fine plains from the bleak table-land of Thibet. On the west, it is the Indus, from the point where it bursts through the northern mountains, to that in which it joins the Indian Ocean. Into that ocean, southern Hindostan projects, in the form of a vast triangular peninsula, which presents two opposite coasts, Malabar to the south-west, and Coromandel to the south-east, both terminating in the southern extremity of Cape

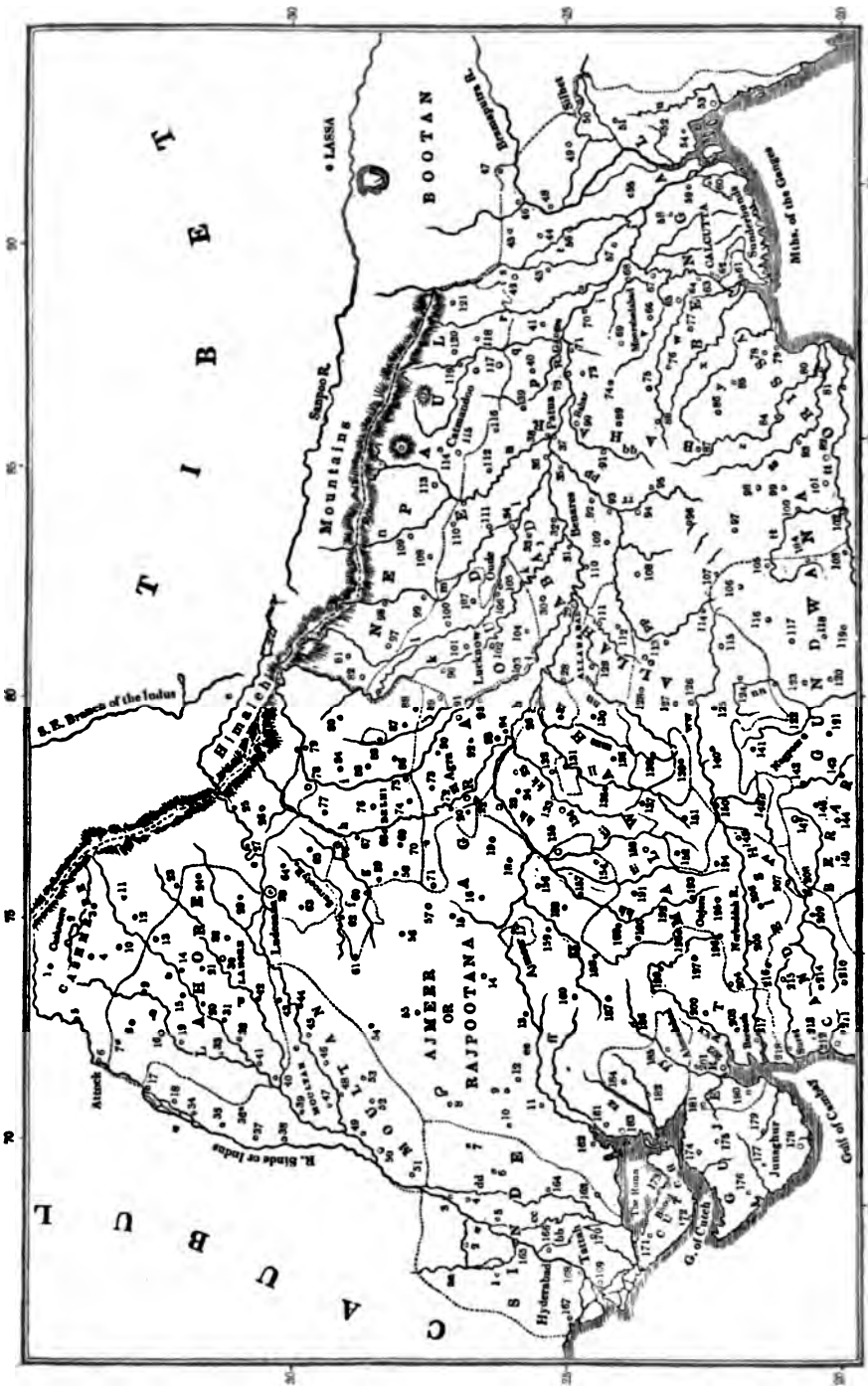
Comorin. Thence India is prolonged by the large contiguous island of Ceylon. The coast of Coromandel, with the opposite shores of Arracan and Malacca, enclose a large sea, called the Bay of Bengal. Between this bay and the termination of the Himalayah occurs a short interval, forming the most eastern and the least accurately defined boundary of Hindostan. The natural limit here seems to be the channel of the lower Brahmapoutra, though Bengal claims a certain extent of hill and jungle on the other side.

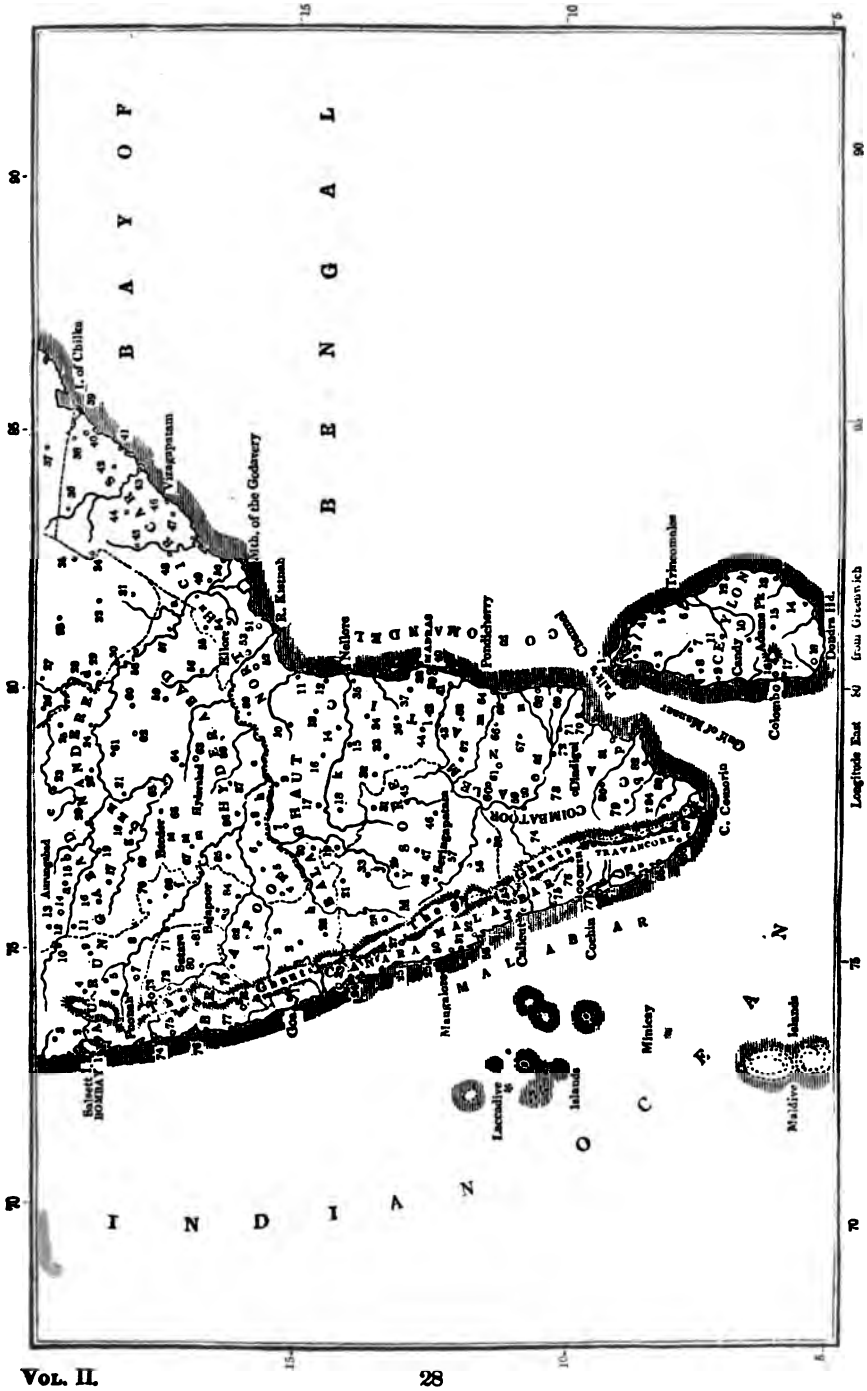
Amid the grand features of nature in this region, the extended mountain range of Himalayah, which forms its northern boundary, is pre-eminent. After crossing the Indus, and enclosing the beautiful valley of Cashmere, this range, which, in bounding Afghanistan, under the name of Hindoo Koh, had an almost due easterly course, takes a south-east line, which it nearly follows till it passes the frontier of Hindostan. The name, which is derived from the Sanscrit term *Hem*, snow, is evidently suggested by that long range of pinnacles, white with eternal snow, that is seen far along the wide plain of central India, which luxuriates in the perpetual summer of the tropics. Although the wonderful distance from which these peaks are descried could not but indicate them to be exceedingly lofty, yet the difficulty of reaching them across a hostile country long prevented any accurate observation. Thirty years ago, their summits were not supposed to rival those of the Cordillera, believed then the most elevated on the globe. It was in 1802 that Colonel Crawfurd, after a residence in Nepal, communicated observations, according to which Chimborazo must yield the palm to Dwalagiri and Chandradabani. Intense curiosity was thus excited, and a series of investigations followed. The missions of Kirkpatrick and Hamilton to Nepal; the expeditions of Hardwicke, Webb, Moorcroft, Fraser, and others to the source of the Ganges, with the application of the improved modern formulæ, at length fully established the fact. Although the height of the chain is everywhere stupendous, no part of it rivals those amazing peaks which tower on one side over the sources of the Jumna and the Ganges, on the other over those of the Sanpoo and the Indus.

Central Hindostan, below its great mountain boundary, consists generally of a vast expanse of plain; but the southern part, composing the great peninsula between the Malabar and Coromandel coasts, though it cannot comparatively be called mountainous, is a very hilly country. Two great chains extend along the opposite coasts, parallel to each other, or rather diverging, and leaving between them and the sea only a plain of forty or fifty miles in breadth. They rise in few places above 3000 or 4000 feet high; but are very rugged and steep, and the entrance into the interior is only by very narrow and difficult passes. The name of Ghaut, which, through the Teutonic languages, has come to ours in the word *gate*, being applied to these passes, has been gradually extended to the mountains themselves. The most continuous chain is that of the Western Ghauts, which extends, for nearly 1000 miles, from Surat to Cape Comorin. It forms, evidently, the highest land of southern India, since all the great rivers flow across from it to the opposite coast. Though steep and stony, the hills are not broken, but covered generally with a stratum of earth, sustaining stately forests, particularly of bamboo, which is found nowhere else in equal perfection. The Eastern Ghauts seldom rise to the height of 3000 feet. Mr. Hamilton limits their extent to a line of about 300 miles from the Cavery to the Krishna; but, as a low chain runs from that river to the Godavery, which beyond rises again into a lofty barrier, almost closing the passage between the Circars and the interior, there seems little reason why the whole should not be considered as one continuous chain, almost equal in length to the western. The interior, between these two chains, consists chiefly of successive table-lands supported by the opposite Ghauts and by chains crossing from one to the other, diversified also by single precipitous eminences, which are formed into almost impregnable hill forts. One continuous chain, the Vindhya mountains, runs across the broad base of the peninsula, and forms a rugged boundary between it and the great plain of Hindostan Proper. On the west it is connected with a range of bold and lofty hills, which compose the territory of Rajasthan.

The rivers of Hindostan form a feature no less important and celebrated than its mountains. The Himalayah, from its lofty magazines of tempests and snow, pours down a world of waters, which, everywhere descending its steeps, unite at length in the two great branches of the Indus and the Ganges. These, with their tributaries, even before they reach the plain, present the mass and breadth of great rivers, while they retain the rapidity of mountain torrents.

The Ganges holds a pre-eminent place among the rivers of Hindostan, and indeed of Asia; not, however, from the length of its course, which some others surpass, but from its watering the finest plains of this celebrated country. The Ganges had been represented as flowing out of the lake Manasarowara, when, after a long westerly course, it turned to the southward, and penetrated across the Himalayah. Mr. Colebrooke, however, considering these reports as very doubtful, sent, in 1808, an expedition to this spot, which has since been very fully explored by successive travellers. They have never, indeed, been able to penetrate into the mass of mountains piled upon mountains, from which the Ganges is first seen descending; but they have traced it till it appears a mere rivulet issuing from under beds of eternal snow. There cannot thus be the least doubt that it rises in the southern steeps of


T I B E T
BOOTAN
Mountains
Sanpo R.
LASSA
Himalaya
R. Brahmapoutra
R. Ganges
Mths. of the Ganges
Gulf of Cambay
Longitude East from Greenwich


B A Y O F B E N G A L
I N D I A N O C E A N
Mouth of the Godavery
R. Kistnah
Pondicherry
Trincomale
Colombo
Point de Galle
C. Comorin
Longitude East from Greenwich

the Himalayah, and not in any point north of that chain. About thirty miles below Serinagur, the *prayaga* or junction takes place between the Bhagirath and the Alacananda, the two original branches of the Ganges; of which the former, though not of so long a course, is generally regarded as the original stream. About five hundred miles below, at Allahabad, it receives the Jumna or Yamuna, almost equal to itself, which has risen in a lofty peak not far to the west of its own source, and, by means of its tributaries, the Chumbull and the Betwah, has drained the northern side of the Vindhya mountains. From this side also it receives the Soane. But its main tributaries are from the north, as it runs parallel to the Himalayah mountains, the Gogra, the Coosy, the Gunduck, poured down from their steeps. After receiving this last stream at Monghir, it may be considered as having reached its greatest magnitude, being from one to three miles broad, and thirty feet deep. It is navigable without interruption to the mountain districts, considerably above Allahabad. The rise occasioned by the rainy season begins in the end of April, and continues to increase until the middle of August, when it reaches in many places thirty-two feet, and all the level districts on its lower course are inundated, sometimes for the breadth of one hundred miles. About 200 miles from the sea, the Ganges ramifies into a delta, of which the numerous branches, in entering the Bay of Bengal, form a labyrinth of channels and creeks called the Sunderbunds. In most of them, particularly those into which the largest branch divides, the force of the current is insufficient to clear away the bar of sand accumulated at the mouth. It is only by the Hoogly branch, which passes by Calcutta, that large vessels can penetrate.

The Indus, or Sind, the western limitary stream of India, arises from very imperfectly known sources, in the interior of Thibet. Its longest branch appears to be that called the river of Ladak, which rises near the lake Manasarowara, and flows north-west to the above

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References to the Map of Hindostan.—Part 1.

NORTH PART.
1. Gurchah
2. Cashmere
3. Durreo
4. Paeemah
5. Dera
6. Attock
7. Puttyjuagu
8. Banda
9. Jhylum
10. Rajoor
11. Bardarwell
12. Chinnanee
13. Jummoo
14. Witzerabad
15. Khumb
16. Pindee Dadun Khan
17. Maree
18. Daood Kyl
19. Sudda
20. Julalpoor
21. Emirabad
22. Umritsir
23. Botung
24. Nagorcote
25. Rampoor
26. Choupal
27. Belaspoor
28. Ludeeana
29. Jallindur
30. Lahore
31. Sollaree
32. Keeva
33. Seobewal
34. Jinderwalee
35. Bukhur
36. Mauakaira
37. Leia
38. Adookegurree
39. Moultan
40. Sboree
41. Trimoo
42. Bhaut
43. Debalpoor
44. Kotelee
45. Chuckoo
46. Hasilpoor
47. Meerapoor
48. Bawulpoe
49. Kabe
50. Khangur
51. Ahmudpoor
52. Durroowal
53. Mojgur
54. Anopyghur
55. Bikaneer
56. Chorroo
57. Singanah
58. Dadree
59. Bekalpe
60. Hansi
61. Gundalee
62. Futtehabad
63. Hudja
64. Sirsind
65. Shahabad
66. Kurnal
67. Panniput
68. Delhi
69. Feerooknugar
70. Tijara
71. Narnaul
72. Muttra
73. Alleeghur
74. Koorjan
75. Anopshehr
76. Meerut
77. Sehrsunpoor
78. Hurdwar
79. Serinagur
80. Almora
81. Dipal
82. Goomoorlekgur
83. Rampoor
84. Nujibabad
85. Chandpoor
86. Sumbul
87. Bareily
88. Cutterah
89. Shahjehanpoor
90. Kargunge
91. Furruckabad
92. Minporee
93. Etawah
94. Shahpoor
95. Kanouge
96. Khyrabah
97. Bangphi
98. Rugun
99. Deucar
100. Baraueh
101. Biswah
102. Lucknow
103. Cawnpoor
104. Bareilly
105. Oude
106. Fyzabad
107. Goondah
108. Kachhi
109. Gaikot
110. Nayakot
111. Goorackpoor
112. Bettiah
113. Gorkha
114. Catmandoo
115. Mukwaunpoor
116. Hatcoule
117. Ammerpoor
118. Vyaypoor
119. Khatang
120. Chayanpoor
121. Sikim.

SOUTH PART.
1. Drubbeeh
2. Larkham
3. Buckor
4. Kheerpoor
5. Nooshura
6. Bettoon
7. Shahghur
8. Jesselmere
9. Aurung
10. Koorer
11. Beannee
12. Foolsoond
13. Joudpoor
14. Nagoor
15. Kundailah
16. Jyepoor
17. Ajmeer
18. Menapara
19. Hindoon
20. Bhurtpoor
21. Agra
22. Futtehpoor
23. Dohlpoor
24. Gwalior
25. Gohud
26. Kalpoe
27. Rahte
28. Bandah
29. Allahabad
30. Perihghur
31. Bunares
32. Gazypoor
33. Azimghur
34. Gopalpoor
35. Arrah
36. Chuprah
37. Patna
38. Hajypoor
39. Durbungah
40. Sowa
41. Purneah
42. Sangshgotta
43. Dinagepoor
44. Rungpoor
45. Beybar
46. Rangamutty
47. Biene
48. Hautchella
49. Lacur
50. Silhet
51. Torroff
52. Comillah
53. Islamabad
54. Colinda
55. Pucculoe
56. Goragot
57. Nattore
58. Mahmudpoor
59. Gurnada
60. Backergunge
61. Culpee
62. Fort William
63. Calcutta
64. Hoogly
65. Burdwan
66. Soory
67. Plassey
68. Moorshedabad
69. Noony
70. Rajhmahal
71. Boglipoor
72. Curruckpoor
73. Monghir
74. Chackhi
75. Nidghur
76. Rogonauthpoor
77. Bissunpoor
78. Harriorpoor
79. Belasore
80. Jehaujpoor
81. Cuttack
82. Tikripurra
83. Lanlum
84. Puddampoor
85. Contah
86. Singboom
87. Doessah
88. Ramgur
89. Goomah
90. Bahar
91. Gayah
92. Saseram
93. Rotasghur
94. Gurwa
95. Palamow
96. Sirgoojah
97. Odeypoor
98. Jushpoor
99. Shahpoor
100. Sambhulpoor
101. Sumnagur
102. Sohnpoor
103. Byraghur
104. Nurrah
105. Migdah
106. Ruttunpoor
107. Mahtin
108. Burgowa
109. Bidzeghur
110. Mirzapoor
111. Etamah
112. Goorha
113. Bandoogur
114. Anokpoor
115. Ramghur
116. Nowaghur
117. Dhumda
118. Belload
119. Cootalla
120. Chickly
121. Girhur
122. Nagpoor
123. Tikeree
124. Heerapoor
125. Dhooma
126. Gurrah
127. Kuttaingee
128. Sienuggur
129. Callinger
130. Chatterpoo
131. Jhaunsee
132. Ditteah
133. Nurwur
134. Sheopoury
135. Chiudeirree
136. Sindwa
137. Seronge
138. Saugur
139. Simereah
140. Chowreghur
141. Sindwarrah
142. Rispoor
143. Ballygaum
144. Karinjah
145. Lakeowaree
146. Omrawuttee
147. Ellichpoor
148. Beitool
149. Hurdah
150. Hoosingabad
151. Bhopal
152. Shujawulpoor
153. Rajghur
154. Suckutpoor
155. Seopoor
156. Rampoora
157. Kotah
158. Boondee
159. Tennah
160. Kamulnere
161. Thurrand
162. Ban Kasir
163. Begaur
164. Wurseah
165. Sehwaun
166. Hyderabad
167. Curachee
168. Tattah
169. Bohaur
170. Raug
171. Jharrah
172. Mandavie
173. Bhooj
174. Morvee
175. Surdhaur
176. Ghoomty
177. Jenaghur
178. Diu Fort and Island
179. Amrinlly
180. Bhownugger
181. Wudwaun
182. Putten
183. Soosegong
184. Palhanpoor
185. Purrauntee
186. Puloh
187. Oodipoor
188. Chittore
189. Rampoor
190. Mundissoor
191. Perowa
192. Mehidpoor
193. Oojein
194. Oonchoad
195. Indore
196. Bhopawur
197. Ritlawud
198. Rodam
199. Banswarra
200. Godra
201. Ahmedabad
202. Cambay
203. Baroda
204. Odeypoor
205. Burwaunee
206. Kurgoan
207. Burhaunpoor
208. Idulabad
209. Nusserabad
210. Chandoor
211. Futtehpoor
212. Damaun
213. Gundavee
214. Moolbeer
215. Nandoorbar
216. Sooltanpoor
217. Baresach
218. Surat.

Rivers.
a Sinde, or Indus
b Jelum, or Behut
c Cheenab
d Ravee
e Setlaja, or Sutledge
f Sursooty
g Chittung
h Jumna
i Ganges
j Ram
k Kundowah
l Sarjoo, or Gogra
m Rapti
n Gandoki, or Gunduck
o San Coosy
p Gogary
q Coosh
r Mahanada
s Attri
t Curruttya
u Chingree
v Adji
w Dummoodah
x Cassie
y Subunreeka
z Coyle
aa Arsi
bb Sonkra
cc Furran
dd Naure
ee Lonee
ff Sookre
gg Banass
hh Chumbul
ii Newass
jj Parbuttee
kk Sindo
ll Betwa
mm Dessaun
nn Cane
oo Tonse
pp Soane
qq Dunneah
rr Coyle
ss Beroora
tt Mahaneddy
uu Wyne Gunga
vv Taptee, or Tuptee
ww Nerboddah
xx Mhye
yy Sauberrmutee
zz Serrawuttee.

city, where it is swelled by the Shyook descending in an opposite direction from amid the snows of the mountain-range called the Kuenlun. It seems to have been by mistake that a branch, considered even as the real Indus, was supposed to join it at Draus. After descending from the mountains and passing Attock, where it is first considered an Indian river, the Indus, through all its remaining course, flows almost due south. The Kama here pours into it the mountain streams of Cabul and Cashgar; but its grand accession is about 400 miles farther down, where it receives in one united channel the waters of five streams celebrated in history; the Jelum (Hydaspes), the Chenab (Acesines), the Ravee (Hydraotes), the Beya (Hyphasis), and the Sutledge (Hesudrus). These drain all the western steeps of the Himalayah, and the last mentioned even crosses it from a source in Thibet. The Indus now becomes a river of the first magnitude, about a mile in breadth, and from twelve to thirty feet deep, capable of receiving vessels of considerable burthen. It is estimated by Mr. Burnes to pour into the sea four times as much water as the Ganges. In its lower course it separates into two large branches, ramifying into many smaller ones, which enclose a delta about 70 miles broad, composing the kingdoms of Sinde and Tatta, part of which is extremely fertile, but that nearest to the sea consists of a desert of flat and marshy sand. These branches are so encumbered with sand, as to admit only flat-bottomed boats; but it is supposed that steam-vessels duly constructed might enter and reach as high as Moultan and Lahore.

The Brahmapoutra, which forms the eastern limitary river of India, pours a vast body of water into the lower Ganges before its junction with the sea, where the two streams united form a bay with numerous islands. Modern geography long identified it with the Sanpoo, and consequently assigned to it a long course along the table-plain of Thibet. But this origin is now generally discredited. Recent expeditions have shown it fed by waters descending from the southern side of the high mountains of Assam, though it remains still uncertain whether its principal branch may not come from beyond these ranges.

The Ganges and the Indus finally absorb all the waters which descend from the southern face of the Himalayah; and these, flowing either eastward or westward over the vast plain of central India, leave between them a large expanse of arid desert bordering on the Indus.

All the other waters of India belong to the southern peninsula. Beginning from the north, the first two that occur flow westward into the Gulf of Cambay: the Nerbuddah, parallel to the Vindhya chain, and fed by its streams; and the Taptee, which passes by Surat. There the chain of the western Ghauts begins, whence, as already observed, all the other large rivers flow eastward into the Bay of Bengal. The principal are the Godavery, the Krishna or Kistnar, and the Cavery; all sacred in the eyes of the Hindoo, and truly valuable by their services to irrigation and commerce. Though rivalling the great rivers of Europe, they hold only a secondary place in the geography of Hindostan.

It is somewhat remarkable that, in so large a region, with so many mountains and waters, there should not be a *lake*, with the exception of Chilka on the Coromandel coast, which is a mere salt marsh, like the Mareotis or Menzaleh, and a few very small lakes in the territory of Rajpootana. To find this feature on a great scale, we must penetrate its northern barrier into central Asia.

References to the Map of Hindostan.—Part 2.

NORTH PART
1. Bombay
2. Callianee
3. Gorah
4. Jooner
5. Serroor
6. Poonah
7. Jejooree
8. Bareinda
9. Ahmednuggur
10. Tokah
11. Godavery
12. Aurungabad
13. Assaye
14. Jalnah
15. Purloor
16. Bheer
17. Burdaunpo
18. Oodgher
19. Keir
20. Nandere
21. Potungull
22. Neermul
23. Mahoor
24. Poonakollo
25. Manickaroog
26. Chandah
27. Coogony
28. Koyapilly
29. Charrah
30. Bekgoorem
31. Tetliah
32. Dewilmurry
33. Colun
34. Jaghederpoor
35. Bustar
36. Currode
37. Durgapussaude
38. Viziangur
39. Ganjam
40. Borampoor
41. Turkelly
42. Gundapoorum
43. Cicacole
44. Saloor
45. Nunapoorum
46. Vizagapatam
47. Anikapilly
48. Golconda
49. Rajamundry
50. Curinga
51. Masulipatam
52. Guntoor
53. Condapilly
54. Ellore
55. Ruggapoor
56. Cummamett
57. Huppawarram
58. Bemunpillee
59. Warangol
60. Ramgherry
61. Mutpully
62. Elgundel
63. Hydrabad
64. Golconda
65. Jogepettah
66. Beeder
67. Kulburga
68. Sholapoor
69. Luttoor
70. Yyrag
71. Punderpoor
72. Satara
73. Pondoogur
74. Bancoote, or Fort Victoria
75. Angenweel
76. Jaughur
77. Gherah
78. Nandeseay
79. Chiorey
80. Turgaon
81. Naguz
82. Gohauk
83. Bejapoor
84. Tallakote
85. Saughur
86. Muttal
87. Gunpoor
88. Dewarkonde
89. Macherla.

SOUTH PART.
1. Goa
2. Darwar
3. Nurgoond
4. Gudjunterghur
5. Moogull
6. Cavital
7. Adonie
8. Rachoor
9. Kurnool
10. Cummum
11. Ongole
12. Cauvelly
13. Paumoor
14. Budvail
15. Cuddapa
16. Chagulmurry
17. Gooty Droog
18. Anhantapoor
19. Rai Droog
20. Bellary
21. Cancoopa
22. Savanoir
23. Unkolah
24. Compta
25. Jallycoon
26. Coondapoor
27. Bednore
28. Sheemoga
29. Boodyhull
30. Chittledroog
31. Paunaconda
32. Cuddree
33. Gurrumconda
34. Chittavail
35. Nellore
36. Trippatty
37. Naglapoorum
38. Pulicat
39. Madras
40. Fort George
41. Chingleput
42. Arcot
43. Vellore
44. Chittoor
45. Juneumcota
46. Bangalore
47. Caddaba
48. Chunroypatam
49. Perrapatam
50. Mangalore
51. Nelliseer
52. Yeshy Mulay, or Mount Dilly
53. Cananore
54. Calicut
55. Tambercherry
56. Mysore
57. Seringapatam
58. Hurdunhully
59. Erocle
60. Salem
61. Belloor
62. Trippatoor
63. Chittapett
64. Pondicherry
65. Cuddalore
66. Tiagur
67. Volconda
68. Tranquebar
69. Negapatam
70. Puttucottah
71. Tanjore
72. Trichinopoly
73. Darapooram
74. Coimbatoor
75. Ponany
76. Trichoor
77. Cochin
78. Calicoulan
79. Shevacaushy
80. Madura
81. Armepcotay
82. Vaimbaur
83. Pallemcotta
84. Tinnevelly
85. Coulan
86. Trivander
87. Travancore.

ISLE OF CEYLON.
1 Part Pedro
2. Ponoryn
3. Mantotte
4 Malativo
5. Cutchevelly
6. Trincomalee
7. Anurajapoora
8. Nadewalge
9. Chilaw
10. Nalande
11. Candy
12. Batticalo
13. Ogheode
14. Mahagam
15. M'Donald
16. Colombo
17. Caltura
18. Point de Galle.

Rivers.
a Godavery
b Ghurk Poorna
c Payn Gunga
d Pranheeta
e Kistnah, or Krishna
f Beema
g Manjera
h Toongbuddra
i Malpurba
j Hinderv
k Pennar
l Palaur
m Punnair
n Coleroon
o Cavery
p Vayagaroo
Vyparoo

SECT. II.—*Natural Geography.*

SUBSECT. 1.—*Geology.*

I. *Himalayah.*—The Himalayah mountains may be divided, in a geognostical view, into three different zones. On approaching this colossal range from the plains, a sandstone formation is the first which arrests the attention, and forms the first or lowest zone or belt. This rock, which has a clayey basis, and is often in the state of conglomerate, is distinctly stratified, and the strata generally dip to the N.E. under 20° or 25°. It contains layers of coals, said to be of the lignite or brown coal family; which statement, if correct, renders it probable that the sandstone is much more recent than that of the great coal formation of Britain. This sandstone seldom attains an elevation of more than 3500 feet above the level of the sea, or 2500 feet above the plains at its base.

To the sandstone succeeds the second zone, or zone of slaty rocks. These are at first *transition* clay slate with greywacke, and limestone enclosing remains of shells and corals; next *primitive* clay slate, which is succeeded by mica slate, in both of which occur talc slate, chlorite slate, beds of quartz rock, often of great magnitude, limestone or marble, potstone, and hornblende slate. The *copper mines* of these mountains are situated in the limestone and potstone districts. Veins of porphyry are observed traversing the mica slate. This zone ranges in height from 1500 to 8000 feet. This tract is remarkable for attaining its greatest elevation on its northern and southern extremities, while between it is of less height; forming, in fact, if the mean surface only be considered, a sort of basin or trough. A peculiarity of geognostical structure accompanying this is the disposition along this lowest level of granite tracts or nuclei, each of comparatively small extent, frequently putting on the appearance of veins, and distributed at intervals along the line from the Kalee to the Sutledge. Generally the granite masses, being in the lowest tract, are themselves not very high; but an exception is found in the Chur mountain, which rises to a height of 12,000 feet, and forms the summit of a very lofty, extensive, and well-defined range. Gneiss is occasionally met with on the borders of these masses of granite, but never extensively; and beyond it again succeeds mica slate.

The third zone is that of the Himalayah proper, the snowy ridge itself, and is composed principally of gneiss. It is distinctly stratified, and, like the sandstone, dips to the N.E. It is traversed by veins of granite, some of which are of considerable magnitude: various simple minerals, as garnet, schorl, cyanite, hyacinth, and native gold, occur embedded in it. Dr. Gerard collected fossil shells among strata beyond the region of slates which succeeded to the Himalayah gneiss in going northward. Some of them are said to resemble the *Producta scotica*, found in Scottish coal-fields; some *pectens*, not unlike those met with in the York lias; a *terebratula*, differing but little from that found so abundantly in the inferior oolite, near Bath; an ammonite closely resembling the *Ammonites subradiatus* of Sowerby, which is a fossil of the Bath oolite: *belemnites* were frequently found, and of all dimensions; *orthoceratites* in a clay ironstone. Tertiary deposits are alleged to occur high among the mountains; and an interesting display of rocks of this class, containing remains of sea-shells and fishes, and mutilated fragments of bones of the genus Anthracotherum, of a kind of musk-deer, a viverra, &c., was discovered near Silhet, in the north-east corner of Bengal, and similar remains in some other points of the same province. Diluvium, with bones of various animals, is also mentioned as occurring in this mountainous region. Hitherto but small quantities of ore have been met with in the Himalayahs, and these are of copper, iron, lead, and graphite or black lead: of this latter, many are included under this head.

II. *Middle India.*—This vast tract of country forms an inclined plane, of which the great declivity sinks gradually towards the mouth of the Ganges, while the other inclines towards the Indus. It is almost entirely composed of clays, loams, sands, and gravels, with occasional intermixtures of calcareous concretions named *kunkur*, fossil woods, and animal remains. In this division of India, we may include the coal-field of Damoda. This deposit of coal, which occupies both sides of the Ganges, through a considerable tract of country, and rests upon granite, appears to be geognostically the same formation as the coal formation of Britain. In the coal-pits, of which there are but three sunk to a depth of ninety feet, there are seven beds of coal; one of them exceeds nine feet in thickness. The coal is said to resemble that of Sunderland, in England; but leaves a larger portion of cinders and ashes. It is now extensively consumed in and about Calcutta.

III. *Peninsular India.—Primitive rocks.* A very large portion of the peninsula of India is composed of Plutonian rocks, as of granite, syenite, and trap, the Neptunian strata being much less abundantly distributed. The Neptunian deposits are gneiss, mica slate, clay slate, chlorite slate, talc slate, potstone, quartz rock, and limestone or marble. These deposits are variously upraised, broken, and otherwise changed by vast bodies of Plutonian rocks, of which the most abundant are granite and syenite, two rocks which together form very extensive tracts of country.

Transition ocks.—These occur abundantly, resting upon the primitive deposits, and

frequently covered more or less deeply with secondary formations. The following rocks are mentioned by authors; viz, greywacke, clay slate, quartz rock, and limestone.

Secondary rocks. Rocks of this class abound more in the northern than in the southern and middle districts of the peninsula. Old red sandstone occurs in considerable quantity, resting upon transition deposits: this formation in its turn supports mountain limestone, and rocks of the coal formation. These older secondary formations are overlaid, to a greater or less depth, with new red sandstone, and other rocks apparently belonging to the lias and oolitic series. The green sand and chalk deposits have not hitherto been met with. These secondary deposits are variously upraised, broken, and otherwise changed by secondary trap, which extends over vast tracts of country. The great western or Malabar chain of mountains, which commences in Candeish, and terminates at Cape Comorin, is at its northern extremity covered by a part of an extensive overlying trap formation, which extends in this quarter from the sea-shore of the Northern Concan to a considerable distance eastward, above and beyond the Ghauts, as far as the river Toombuddra and Nagpore. The trap hills are tabular, terraced, separated from each other by ravines, often of vast magnitude, and the whole frequently covered with splendid forests of teak and other trees, forming some of the most beautiful and romantic scenes in India.

Tertiary rocks. Tertiary deposits, containing fossil trees erroneously said to be the tamarind tree, occur near Pondicherry; and clays and sands with sea-shells, asserted to be tertiary, are met with near Madras.

Alluvial rocks. These occur generally distributed; and, in some places, the diluvium is of great thickness.

Minerals useful in the arts found in Peninsular India.—Granite and *syenite.* These rocks, which occupy a great part of the Carnatic, Malabar, and Mysore, nearly the whole of the Nizam's dominions, and a large part of Bahar, are employed as building stones. *Talc slate* and *potstone* are employed by the natives for the manufacture of various utensils. All the fine plaster with which the walls of the houses are covered in India, and which is so much admired by strangers, is composed of a mixture of fine lime and soapstone rubbed down with water. When the plaster is nearly dry, it is rubbed over with a dry piece of soapstone, which gives it a polish very much resembling that of well polished marble.

Marbles are quarried in different parts of the country, but nowhere extensively. The *laterite*, or brick stone, is used as a building stone, for which it is excellently fitted. Most of the handsome Roman Catholic churches at Goa are built of it.

Gems. The most valuable of all the gems, the *diamond*, occurs in alluvial deposits, as Cudapah, Banaganpelly, &c., in the river district of the Krishna; also in the bed of the river Godavery; at Sumbulpore, in the district of Mahanuddy; and at Pannah, in Bundelcund. *Corundum*, from its coarsest state to its finest, in the form of *Oriental ruby*, occurs in the granite and syenite district: the *spinel ruby* is also a native gem, and the same is the case with *zircon*, which occurs in alluvium in the Ellore district. *Schorlous topaz*, *tourmaline*, and *schorl*, occur in the granite and syenite districts. *Chrysolite* is an inmate of the secondary trap rocks; *precious garnet*, *pyrope garnet*, and *grenatite garnet*, are met with in primitive tracts of country, as also *rock crystal*, and various beautiful *felspars*. *Amethyst* and *catseye*, and many kinds of *cornelian*, *jasper*, and *agate*, are also natives of the peninsula of India. The annual value of cornelian exported from India formerly amounted to 11,000*l.* The secondary trap rocks afford beautiful and splendid specimens of different species of the elegant *zeolite* family. Metalliferous minerals occur but in small quantities. *Gold* and *silver* are but sparingly distributed; *iron* is abundant, but hitherto its ores have not been mined to any considerable extent. There are, at present, no *copper* mines of any importance, although the general use of copper or brass utensils among the natives of India, and the preference given to them before all other kinds of vessels, would seem to show that this metal was mined much more extensively in former times.

Subsect. 2.—*Botany.*

British India, notwithstanding its vast extent, its varied vegetation, and great importance, must, inasmuch as regards its botany, be passed over in fewer words than we could wish. The present volume would not suffice to contain half of what is known of the useful or curious vegetables with which botanists are now acquainted, through the indefatigable exertions of a few individuals, whose names, nevertheless, deserve to be recorded, even in this brief notice. Only forty years ago, and nothing was ascertained, comparatively speaking (save through the medium of the *Hortus Malabaricus*), of the vegetation of this vast country, extending from near the equator to beyond the thirtieth degree of north latitude, and from the sixty-eighth to the ninety-third degree of east longitude. In 1793, Dr. Roxburgh was appointed to the charge of the botanic garden at Calcutta; which includes within its boundaries an area of 300 acres; and this gave rise to the *Hortus Botanicus Calcuttensis* and the splendid *Plants of Coromandel.* Between the years 1820 and 1824, the learned and excellent missionary, Dr. Carey, edited the two volumes (extending no farther than the

class Pentandria and order Monogynia) of *Flora Indica*, from the MSS. of Dr. Roxburgh, Dr. Wallich, and Dr. Jack. For a short period, during the illness and consequent absence of Dr. Roxburgh, Dr. Francis Buchanan Hamilton was appointed to the care of the Calcutta garden. To him succeeded on his decease, Dr. Wallich, whose assumption of this office forms a new era in the botany of India. This gentleman, a pupil of the celebrated Hornemann of Copenhagen, brought a degree of zeal to the duties of his situation which is rare in any country, and certainly unequalled in a tropical climate. At his suggestion, the Honourable Directors of the East India Company placed the garden establishment upon a footing far surpassing any thing of the kind known in Europe. The spot of ground is no less than five miles in circumference, and upwards of 300 gardeners and labourers are employed in the charge of it. Gardens, in connection with it, have been formed in other remote parts of the Indian possessions; collectors have been sent out to discover new and especially useful plants; and the residents and other gentlemen attached to science were invited to transmit the vegetable productions of their respective districts to Calcutta, both in a living and dried state; and among these, the Honourable Mr. Gardner, long the Company's Resident at Silhet, furnished most extensive and valuable collections.

In 1820, Dr. Wallich himself undertook a journey to Nepal, in order to investigate and procure its rich stores for the garden and herbarium. This occupied eighteen months; at the expiration of which he visited Singapore and Penang, and returned to Calcutta, enriched with new treasures. His last important excursion was to Ava, immediately after the reduction of the Birman empire. Here an entirely new field was laid open to his view; and when the collections of this vast and fertile country were added to those already deposited in Calcutta, the mass was estimated at 8000 or 9000 species. Of the difficulty of preserving dried plants in an Indian country, few can possibly form an idea, except by actual experience. In addition to the coleopterous insects, which in all climates commit most provoking ravages on these vegetable mummies, the ants are ready in the tropics to devour both the specimens and the paper in which they are preserved. To secure them from these attacks, the only remedy is to have the cabinets insulated, by setting the feet of them in troughs of water. But so rapid is evaporation under an Indian sun, that it was the entire office of a Hindoo, to go the round of the room and replenish these troughs with water as fast as it evaporated, until the shadows of evening came on.

With this vast herbarium, and with many seeds and chests of living plants, Dr. Wallich arrived in England in the autumn of 1828. Here he expressed the generous wish that all the civilised world should benefit as much as possible by his exertions, and that the duplicate specimens, which were exceedingly numerous, should be divided among the principal botanists, who were also invited to take a share in the publication of those genera or families with which they are most conversant. In this dispersion, he was aided by the most zealous botanists in England, and by M. A. Decandolle from Geneva, and Professor Kunth from Berlin. The entire examination of many species, in order to the formation of a complete catalogue, with numbers corresponding to the specimens distributed, was executed by Dr. Wallich. But his great work is his Plantæ Asiaticæ Rariores; a work which, whether for the beauty or rarity and interest of the subjects, the execution of the plates, or the accuracy of the descriptions, is surpassed by no publication of any period.

Dr. Wight is another gentleman to whom the botany of India is greatly indebted. To his able charge was intrusted the Company's garden at Madras, so long as this establishment continued: thus giving this gentleman, as it were, the same command over the vegetable productions of the southern peninsula of India which Dr. Wallich enjoyed over those of Hindostan Proper. In many long, painful, and expensive journeys, he made ample collections, and employed, at his own charge, an excellent draughtsman. In the year 1831 he arrived in London with an herbarium of 4000 species, and about 100,000 specimens of plants of the presidency of Madras.

Another excellent botanist, Mr. Royle, has subsequently arrived in London, from a most interesting district near the northern limit of the British territories in India, namely Scharanpur, where an institution, similar to that above mentioned, as being in charge of Dr. Wallich, has been taken under the protection of the Honourable East India Company. In the year 1779, Tabita Khan first appropriated the revenues of seven villages for the maintenance of a public garden; an income, however, which was much reduced by the native princes, his successors. The Marquess of Hastings, with the enlightened views of a statesman, determined that what had been intended for the gratification of an Asiatic sensualist, should contribute to the advancement of science, at the same time that it was a means of increasing the comforts of the people, and administering to the tastes of the most civilised Europeans.*

The situation of Scharanpur, in point of latitude, elevation, vicinity to the hills, and the facility of irrigation from the Doub canal, renders it particularly eligible for such a purpose;

* See an account of the Honourable Company's Botanical Garden at Scharanpur, by F. Royle, Esq., late superintendent; published in the Journal of the Asiatic Society, February, 1832.

in short, in latitude 30°, the same parallel which passes through Persia, Arabia, Egypt, and over the southern boundaries of Libya, Barbary, and Morocco, by New Orleans, between Old and New Mexico, and passing through the very centre of China and Thibet. The elevation, too, 1000 feet above the level of the sea, renders the climate particularly favourable for the introduction into India of plants from the more temperate countries. The state of the atmosphere, indeed, for nearly six months in the year, is so similar to that of Europe, that most of the annual plants from that country may be successfully cultivated, while the cold is not sufficiently great, or of long continuance enough, to destroy the more southern plants, with the exception, indeed, of such tropical ones as cannot bear frost.

The best crops of European and medicinal plants, Mr. Royle tells us, are obtained from seed sown in November; after which the weather becomes steadily colder till Christmas, when some heavy rains usually fall. During this season the growth of perennial and of herbaceous plants from warm climates is checked; but in March a rapid rise takes place in the mean temperature of the month, and the increase, amounting to 42° of Fahrenheit, affords a powerful stimulus, and rapidly accelerates the vegetation of spring. About the middle of April the hot winds begin to blow, and continue to do so till the beginning of June, when the rainy season commences, and according as it terminates, towards the beginning or close of September, depends the late or early diminution of temperature which ushers in the cold weather.

The mean temperature of Scharanpur throughout the year is about 73° Fahrenheit, and of the months of

January	52°,	May	85°,	September	79°,
February	55°,	June	90°,	October	79°,
March	67°,	July	85°,	November	64°,
April	78°,	August	83°,	December	55°.

With a zeal that does him the highest credit, Mr. Royle introduced to this garden a great number of exotics. From China, the Litchi, Loquat, Wampu, Longan, Flat Peach, and Digitated Citron, the Spiræa corymbosa, Dianthus chinensis, Rosa chinensis, and Althæa rosea.—From America, the Mahogany, Logwood, Sapota, Cherimoja, Ash-leaved Maple, Pimento, and Dahlias.—From Africa and New Holland, Aloes, Pelargonia, Stapelias, Amaryllis, Casuarina, Cajuputi, &c. The Barley of the hills, called *ooa*, from an elevation of 10,000 feet above the level of the sea, has become perfectly naturalised in Scharanpur, and a singular species of Wheat from Kanawar, at an equal elevation, succeeds remarkably well. Fiorin Grass is there seen by the side of the Guinea Grass and Lucerne, Succory and Clover, in a thriving state. Many precious medicinal plants are already cultivated, and it is hoped that many more will be introduced. Among the former may be mentioned Rhubarb; the long-leaved Fir, which yields by distillation a valuable oil of turpentine; Henbane, of which the extract is of a very superior quality; Senna, &c. Among timber trees are the Teak, Saul, Toon, Lissoo, Seriss Maple, Casuarina, Bamboo, Jasmine, and Mulberry. From the Saul tree above mentioned a very excellent resin is produced; while various gums are yielded by several trees, from the lower hills, now naturalised at Scharanpur. The fine sugar, for which this district is noted, is chiefly refined by the mucilage of two plants, the Kydia calycina and Hibiscus Abelmoschus.

Our knowledge of the geographical distribution of plants, too, is considerably extended by the establishment of this garden; for its able superintendent has most successfully explored the country in its vicinity, and, indeed, in the northern provinces of India, especially from the tract of country running along the Ganges and Jumna, from Allahabad up the Sutledge, and from the low range of hills which skirt the Himalayah as well as those of Deyra Dun; again from that part of the Himalayan range extending from the plains to the sources of the Ganges and Jumna, and included between the former river to the east and the Sutledge to the west; from Kanawar, a place lying along both sides of the Sutledge within the British territories, but beyond the snowy passes of the Himalayah, and likewise from the valley of Cashmere, whence Dr. Royle has received living bulbs of the "Saffron" of commerce, and roots of the true Salep Orchis, or Misvi. The number of species collected amounts to nearly 4000; namely, of

Dicotyledones	2791
Monocotyledones	783
Acotyledones -	279
	3853.

The forests of India are, it is well known, upon an extensive scale; and little, comparatively speaking, has as yet been ascertained of the species of trees they contain. The indefatigable Dr. Wallich has, chiefly by his own industry, and the various missions in which he was employed in various parts of India, to Nepal and the Himalayah mountains, and in the Birmese territories, together with what are grown in the Calcutta Botanic Garden, collected no less than 456 different species of Indian wood, of which an account is given in the forty-eighth volume of the Transactions of the Society of Arts. Of these a large proportion are employed by the natives. Among them is the superb Butea frondosa (*fig.* 597.), from Gualpaca: two species of Careya, from Nepal; six species of Chestnut, one of Hornbeam, two Cedrelas, a genus nearly allied to mahogany; a Croton, five cubits in girth; two species of

Daphne, D. Gardneri and D. cannabinum, of which the wood, indeed, is not used, but the inner bark is, in Nepal, most extensively manufactured into paper, which possesses the advantages of being strong, not liable to crack, and which is free from the attacks of the white ant; Dipteronitis grandiflora, a stupendous tree, one of those which yields wood, oil, and dammar; five species of Spindle tree; numerous kinds of Fig, but whose wood is usually light and of comparatively little value; an Ash (*Fraxinus floribunda*), whose wood is exactly similar to the Ash of England; Gmelina arborea, used for turnery-ware of all kinds, and cylinders of which, of a proper size, are turned very thin for drums: other musical instruments are also made of it; Cordonia integrifolia, of which the Birmese have a superstition that one beam in every house should always consist of its wood; three Hibisci, Hopea tinctoria, which grows to an enormous size, of which cannons are made, and which produces a valuable resin or dammar; a Holly, a Walnut, "an exceedingly large tree;" a Juniper, from Himalayah; three species of the beautiful Lagerstrœmia, several of Laurel, a Privet, which constitutes a "timber;" a Magnolia, two kinds of Mulberry, three of Nutmeg, whose wood is extensively used; a large Olive; five species of Pine, natives of Nepal, one of which, Pinus Deodora, yields a fragrant wood; the very large Pine of Tawey (*P. Dammara?*); a tree-fern of Nepal forty-five feet high, polypodium giganteum; three species of Plum, four species of Pyrus, ten of Oak, of which the Quercus semecarpifolia becomes a very large tree, having a clean trunk eighty to one hundred feet in height, and fourteen to eighteen feet in the girth at five feet from the ground; a Buckthorn whose wood is very hard and heavy, not unlike English Yew; three Rhododendrons, among them the splendid R. arboreum, of which gun-stocks are made, and which resembles a Plum-tree; a Rubus (or *Bramble*), as thick as a stout man's arm; three Willows, among them the Weeping Willow (*Salix babylonica*), which in Nepal attains an enormous size; Shorea robusta (*fig.* 598.); Saul, or Sole, the staple timber of Hindostan for building purposes; vast quantities of dammar or resin are extracted from it, as well as from Dipterocarpus and Hopea, all of which belong to one family,

597

Butea Frondosa.

598

Shorea Robusta.

599

Tectona Grandis.

the Dipterocarpeæ; a Yew; and, lastly, we shall only further mention the Teak (*Tectona grandis*) (*fig.* 599.), of which ships are extensively built, and these are said to be quite equal to those built of oak; the trunk attains to an enormous size, and the leaves are a foot and a half or more long. Notwithstanding the abundance of valuable timber yielded by India, none is ever exported; and though there is a prodigious extent of forest, neither pot nor pearl ashes have ever been manufactured.

Cotton (*Gossypium herbaceum*) (*fig.* 600.) is a native of the East Indies, and extensively cultivated; so that, in 1818, 67,456,411 lbs. were imported into Great Britain; but the quality is very inferior to that of other countries: the best of it in the London markets is worth 3*d.* per lb. less than the best West India cotton. It is half the value of Berbice cotton: that from Pernambuco, and the modern Egyptian cotton, are reckoned to be 60 per cent. better: and this inferiority, again, is attributed to the ignorance and prejudices of the Hindoos. It is indeed extraordinary, that, admirably as the East Indies are calculated for the growth and exportation of cotton, out of 197,544,880 lbs. the average import into Great Britain of the years 1827 and 1828, the United States furnished 151,834,000; Brazil, 17,754,880; Egypt, 6,957,800; the West Indies (English dependencies), 9,010,560; and the East Indies, 11,987,040.

Sugar, the produce of Saccharum officinarum, (*fig.* 601.) is equally a native of the East Indies, and is, in fact, more or less an object of agriculture in every considerable country of the vast regions comprehended under that name, from the eighth degree of south to the 30th degree of north latitude, and from Persia to China, both inclusive. Of all this wide extent, it is universally allowed that no portion is more suitable to its growth than the British possessions. To obtain sugar in abundance, and of the best quality, nothing more is requisite than to remove the idle and pernicious restraints on the settlement of Europeans. But, as

matters stand now, of 38,390,536 lbs. of sugar imported into Great Britain from the East Indies in 1826, no less than 20,859,440 lbs., or more than half of the whole amount, was the produce of the island of Mauritius. And this inequality is not owing to the difference of duty between Mauritius and the other East Indian sugars: this is not the cause that the trade in the one article is stationary, and in the other advancing with an extraordinary rapidity of increase. A new soil, as yet unexhausted by bad husbandry, the introduction of European machinery, and the superintendence of European resident proprietors, are the true causes.

600

Cotton Tree.

601

Sugar Cane.

602

Indigo.

Indigo, a staple article of the East Indies, one of the most valuable of its products, and one of the most profitable of cultivation in all Hindostan, is yielded by the Indigofera tinctoria (*fig.* 602.): and it is in that country so lucrative, because an immense extent of land is required to produce but a moderate bulk of the dye; because labour and land are cheaper here than anywhere else; and because the raising of the plant and its manufacture can be carried on even without the aid of a house. The first step in its cultivation is to render the ground, which should be friable and rich, perfectly free from weeds, and dry, if naturally moist. The seeds are then sown in narrow drills, about a foot apart. The rainy season must be chosen for sowing; otherwise, if the seed is deposited in dry soil, it heats, corrupts, and is lost. The crop, being kept free from weeds, is fit for cutting in about two or three months, and this may be repeated in rainy seasons every six weeks. The plants must not be allowed to come into flower: as the leaves, in that case, become dry and hard, and the indigo produced is of less value; nor must they be cut in dry weather, otherwise they will not spring again. A crop generally lasts two years. Being cut, the herb is first steeped in a vat, till it becomes macerated, and has parted with its colouring matter; then the liquor is let off into another, in which it undergoes the peculiar process of beating, to cause the fecula to separate from the water. This fecula is let off into a third vat, where it remains for some time, and is then strained through cloth bags, and evaporated in shallow wooden boxes, placed in the shade. Before it is perfectly dry, it is cut into small pieces of an inch square; and finally packed into boxes or sewn up in bags for sale. Indigo was not extensively cultivated in India before the British settlements were formed there; its profits were, at first, so considerable, that, as in similar cases, its culture was carried too far, and the market was overglutted with the commodity. The indigo is one of the most precarious of Oriental crops; being liable to be destroyed by hail-storms, which do comparatively little injury to the sugar-cane and other plants. European skill and capital have been, in India, especially applied to its management for nearly fifty years. What was manufactured by the natives of India, prior to that time, was trash, unfit for the European market, then almost wholly supplied by South America, which furnished England with about 1,200,000 lbs. weight. There are at present, in Bengal, 309 manufactories of indigo for exportation, of which thirty-seven only are conducted by natives, and these in imitation of the European process. The Indians, however, cannot even imitate Europeans to any advantage, with so many examples before them, and in full possession of all the land, to the complete exclusion of their competitors; for the indigo thus prepared is full 15 per cent. lower in value than that manufactured by Europeans; and as to indigo made by the old native process, it is still wholly unfit for the foreign market; and even when re-manufactured by Europeans, which is sometimes done, it is still, from the deterioration it has undergone in their hands, a very inferior commodity. The average yearly quantity of indigo produced for some time back in the British dominions in India, has ranged from 8,500,000, to 9,000,000 lbs. weight, and in value from 2,700,000*l.* to 3,300,000*l.* The produce of 1828, the greatest ever known, amounted to 12,000,000 lbs. Before Europeans undertook the culture and manufacture of Indian indigo, it was, as already stated, so bad as to be unsaleable in any foreign market. On an average, it is now about

twelve and a half per cent. better than South American indigo. In short, about four-fifths of the consumption of Europe, Asia, and America is now supplied with good Indian indigo; a commodity which, fifty years ago, had no existence.

Cajeput oil is obtained from an East India shrub, the Melaleuca Leucadendron, and, in a pure state, is considered one of the best preservatives of preparations for natural history. It is used externally, and with much success, as a cure for rheumatic affections and pains in the joints. In India, too, it has been employed in the almost hopeless task of curing the cholera morbus. When that disease first broke out in England, and indeed before it actually made its appearance, Cajeput oil was in such demand, that the price rose to a most extravagant height. But when its inefficiency was unfortunately proved, it was soon reduced to its ordinary standard.

Caoutchouc, or Indian Rubber, is the inspissated juice, not only of several species of Ficus, but of the Urceola elastica of Dr. Roxburgh, or Elastic Gum Vine. To the same natural order with the latter belongs the Strychnos Nux Vomica (*fig.* 603.) (the *Poison nut* or *Vomic nut*), whose seed is among the most powerful of all vegetable poisons: yet the pulp of the fruit appears to be innocuous, being eaten by birds, &c. Of the same genus is the Cleansing Nut (*Strychnos potatorum*). "The ripe seeds," says Dr. Roxburgh, "are dried and sold in every market to clear muddy water. The natives never drink clear well-water, if they can get pond or river water, which is always more or less impure, according to circumstances. One of the seeds or nuts, as they are generally called, is rubbed very hard, for a minute or two, round the inside of the vessel containing the water, which is generally an unglazed earthen one, and the water left to settle; in a very short time the impurities fall to the bottom, leaving the water clear, and, so far as I have been able to learn, perfectly wholesome."

603

Strychnos Nux Vomica.

To the Fig tribe belongs the famous Banyan of India, commonly called Peepul tree, and constantly planted about the Hindoo temples (*Ficus religiosa*) (*fig.* 604.):—

604

Banyan Tree.

"Branching so broad and long, that in the ground
The bended twigs take root, and daughters grow
About the mother tree, a pillar'd shade
High over-arch'd, and echoing walks between."

These roots or props occupy such a space of ground, that one growing on the banks of the Nerbuddah covers an almost incredible area. The circumference which now remains (for much has been swept away by the floods of the river) is nearly 2000 feet. The overhanging branches, which have not yet thrown down their props or supports, overshadow a much larger space: 320 large trunks are counted of this singular tree, while the smaller ones exceed 3000; and each of them is continually sending forth branches and pendent roots, to form other trunks, and become the parents of a future progeny. The whole, according to Forbes's *Oriental Memoirs*, has been known to shelter 7000 men beneath its wide-spread shade.

No less gigantic, as a grass, than the Banyan as a tree, is the Bamboo (*Arundo Bambos*) (*fig.* 605.), whose jointed stems or culms not unfrequently exceed 100 feet in height, with a diameter of a foot near their base. It is of the most rapid growth, clothed, especially at the top, with copious dark green foliage, and literally constitutes forests. It is one of the most extensively useful of all plants, where lightness and durability are required. Houses are built of this cane, and Dr. Patrick Browne assures us that they have been known to endure upwards of 100 years. Besides masts for boats, boxes, cups, baskets, mats, palankeens, and carriages, and a great variety of other utensils and furniture, both domestic and rural, are made of it. Paper is prepared from it, by bruising and steeping in water, when it becomes a paste. It is the common fence for gardens and fields, and is frequently used for water-pipes.

Ginseng, (*Panax Ginseng*) (*fig.* 606.), which constitutes a valuable article of trade in China (though its medicinal properties are grossly exaggerated by that extraordinary people), and the root of a nearly allied species of which (*P. quinquefolia*) is sold by the Americans to the amount of nearly $200,000 per annum, might, there is every reason to believe, be collected to great advantage in Nepal; and this has been suggested by Dr. Wallich, who published the species, under the name of Panax tetraphylla, in his splendid work, *Plantæ Asiaticæ Rariores.*

Sandal wood (*Santalum album*) (*fig.* 607.), the produce of a well-known fragrant tree, is

605

Bamboo.

606

Ginseng.

607

Sandal Wood.

extensively collected in the western part of India, on the coast of Malabar. In some parts it sells at so high a price that the tree is seldom allowed to grow more than a foot in diameter. It is manufactured into musical instruments, small cabinets, boxes, escritoires, and similar articles; as no insect can exist, nor iron rust, as it is said, within its influence. From the dust of this wood the Bramins make the pigment which they employ in giving the frontal mark to their god Vishnu: and oil used in their ceremonies is obtained from the shavings, or at least scented with them.

The Valeriana Jatamansi (*fig.* 608.) (*Nardostachys Jatamansi* of De Candolle) abounds in the hilly parts of Nepal, and is determined by Sir W. Jones to be the true Spikenard of the ancients, or Indian Nard of commerce, and has been employed as a valuable perfume from the remotest antiquity. It is carried across the desert to Aleppo, where it is used, in substances, mixed with perfume, and worn in small bags, or in the form of essence, and kept in little boxes or phials, like atter of roses.

Still lakes, pools, and tanks of water, in various parts of India, abound with many highly curious aquatic plants. Water-lilies of different hues are very common, and one is rendered famous in history, namely, the Cyamus Nelumbo (*fig.* 609.) or Sacred Bean of India, the κυαμος of the ancients, whose splendid flowers, of a full rose colour, are embosomed in large peltate leaves of the tenderest green, and which, as well as the flower-stalk, rise considerably above the surface, not floating like the water-lilies of our country. Sola, too, is an aquatic plant, of which an interesting account is given by General Hardwicke, in the *Botanical Miscellany.* "It has very often interested me, and gratified my curiosity," says that gentleman, to "remark to how many useful purposes the Sola is applied by the natives of India. It is the Æschynomene paludosa of Roxburgh. It grows abundantly on the marshy plains of Bengal, and on the borders of *jeels*, or extensive lakes, in every province between Calcutta and Hurdwar. The plant is perennial, of straggling low growth, and seldom exceeds a diameter of two inches and a half in the stem. It is brought to the Calcutta bazaars in great quantities in a green state; and the thickest stems are cut into laminæ, from which the natives form artificial flowers and various fancy ornaments to decorate their shrines at Hindoo festivals. The Indians make hats of it, by cementing together as many layers as will produce the requisite thickness: in this way, any kind of shape may be formed; and when covered with silk or

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Valeriana Jatamansi.

609

Sacred Bean of India.

cloth, the hats are strong, and inconceivably light. It is an article of great use to fishermen; it forms floats of the best description to their extensive nets. The slender stems of the plants are bundled into fascines about three feet long; and with one of these under his arms does every fisherman go out to his daily occupation. With his net on his shoulders, he proceeds to work without a boat, and stretches it in the deepest waters and most extensive lakes, supported by this buoyant fagot. I must not forget to give you the native name of the plant, which in Bengalee is Shola, commonly pronounced Sola. Dr. Roxburgh considered the plant as annual, I believe. The foliage, and other parts of the plant, where water is wanting, die down to the roots; but where water is plentiful, the stems remain, and branch out afresh in the proper season."

Lastly, we shall mention, among the grandest features of Indian scenery, the Palms, those princes of the vegetable kingdom, which administer to so many of the wants and luxuries of the natives, and which are not confined to the hottest parts of the country; for one species, the Chamærops Martiana of Wallich's *Plantæ Asiaticæ Rariores*, was found by that famous botanist in the valley of Nepal, in lat. 28° N., and at an elevation of 5000 feet above the level of the sea. The south coast of India abounds with the Cocoa-nut (*Cocos nucifera*) (*fig.* 610.), of which the Hindoos celebrate 365 uses that they derive from it. Far superior to this, in the magnitude of its leaves, of which a single one will shelter twelve men, is the Palmyra Palm (*Borassus flabelliformis*) (*fig.* 611.), which sometimes attains to 100 feet, while its trunk yields abundantly the Toddy or Palm wine. The Caryota urens, in the diameter of its stem, which is three feet; and the Betel nut (*Areca Catechu*), in the gracefulness of its trunk and foliage, also excel the cocoa-nut. The fruit of the latter is eaten with the pungent leaf of the Betel pepper already mentioned, whence arises its appellation of Betel-nut Palm. Dr. Roxburgh describes a dwarf palm, under the name of Phœnix farinifera, which yields a farinaceous substance in the heart of the stem or cabbage, similar to the Sago of the shops. This latter substance is the product, it would appear, of two plants, the Sagus farinifera (*fig.* 612.), a native of the peninsula of India, and the Cycas revoluta, a Chinese and Japanese plant.

610

Cocoa-nut.

611

Palmyra Palm.

612

Sagus Farinifera.

*Himalayah, and the southern boundary of Thibet.**—The chain of the Himalayah mountains, an immense barrier which divides the population, the animals, the vegetation, and the climate of the East Indies and Southern Asia, begins, easterly, not far from the river Brahmapoutra, about lat. 28°, and extends in a north-west direction as far as the Indus, lat. 35°. In the south it rises abruptly from the plains of Nepal; to the north, it is nearly on a level with the high ground of Thibet. The highest known mountains belong to this chain; they

* Extracted from the *Géographie Botanique* of M. Mirbel, in the 14th volume of the *Mémoires du Muséum d'Histoire Naturelle.*

are situated between the 28th and 32d parallels. Mr. Colebrooke has deduced the following elevations from the observations of Captain Blake; viz., the Peak of Chandragiri, 21,935 feet; that of Swetagar, 25,261 feet; that of Dhawalagiri, 28,015 feet; this latter peak exceeding Chimborazo by 6000 feet. Fraser estimates the height at which the snow becomes perpetual on the Himalayah mountains at from 14,000 to 16,000 feet; an elevation which is surprising at a distance of from five to nine degrees from the tropics, but which may be explained by the peculiar conformation of this Asiatic region. While large sheltering chains of mountains, running almost parallel with the equator, and rising like steps, one above another, from the north of Siberia to Nepal, break and arrest the currents of cold air which descend from the hyperborean country; on the other hand, the warm breezes from the vast plains of Hindostan sweep gently upward on the easy slopes of the Himalayah mountains, and reach the higher regions without intermixture or contact with the northern atmosphere; thus causing the Himalayan range to partake of the equatorial zone, in the character of its climate and vegetation.

The lower plains of Nepal and Boutan differ little from Hindostan in their vegetation. Warmth and constant moisture keep up a sempiternal verdure; the cultivated spots produce, at the same time, the Mango, the Orange, the Pomegranate, the Peach, the Apple and Pear, the Walnut-tree, the Banana, the Bamboo, &c. The Erythrina monosperma and Bombax heptaphyllum are the most common trees in uncultivated spots. The forests of the lower ridges of the Himalayah mountains are composed particularly of Shorea robusta, mixed with Dalbergia, Cedrela, &c. At an elevation of from 2000 to 2500 feet, the Pinus longifolia and Mimosa Catechu grow. At this height, in about 27° 17′ N. lat., Hamilton computes the mean annual temperature at +23° 3′. In proportion as the ground rises, the species of plants that belong to the plains of Hindostan become rare, and those which are peculiar to the mountains usurp their places. The vegetation imperceptibly assumes the generic character of the productions of the north, while it still presents a number of specific types that are foreign to Britain. The Pine Apple, Sugar Cane, Bamboo, and Rice are still cultivated in the valleys, at an elevation of from 3200 to 4400 feet: but beyond 6300 feet nothing but barley, wheat, millet, and the other grain of northern zones, will succeed. The common trees are species of Michelia, Gordonia, Fir and Pine trees, Podocarpus, Chestnut, Oak, Walnut, Laurel, Ilex, &c.

There is never either frost or snow in Boutan, except on the high mountains; but at Katmandu (lat. 27° 41′), the capital of Nepal, at an elevation of about 4000 feet, it snows every winter. In that part of the Himalayah range which looks towards Hindostan, and on the southern frontier of Thibet, Fir, Spruce, Juniper, Salix tetrasperma, Birch, &c. attain a great height, when not arrested by the sterility of the soil, the precipitous ledges, and the avalanches of snow. At from 12,000 to 13,000 feet, upon those peaks which shelter the masses of perpetual snow from which the sources of the Ganges take their rise, Captain Hodgson remarked a tree of the family of the Coniferæ, the branches of which, as thick as a man's leg, swept the ground. This tree, which he conceives to be a Pine, and which the Hindoos call Chandan, is perhaps the Abies dumosa of Don, which in that country holds the place which Pinus Pumila does on the higher parts of the British mountains. Hodgson found the Chandan in lat. 31° to 32°, on the peak of Chour, and on the snowy mountains of Kounawur, which arise from Thibet. In this region, at a pass about 15,000 feet high, A. and P. Gerard observed, on the 2d of October, under a tent, the thermometer indicating, at noon, + 10°; at 4 o'clock it was zero, and the following morning at sunrise the temperature was 8° 3′. This cannot be considered cold, if we take into consideration the season, the height, and the latitude. The vine, in a favourable exposure, produces delicious grapes at an elevation of from 8000 to 12,000 feet English. It must be observed that this is owing to the immediate efficacy of the solar radiation, which is the more powerful as the intervening stratum of air is less thick and more rarefied. The last villages, the last cultivated fields, are at 13,000 feet: and this is the usual limit of the large Pine forests. At this elevation it is almost needless to say that the harvest pays very inadequately for the labour of cultivation: it consists of some of the Cerealia, Beet root, Millet, &c. A thousand feet higher up, some clumps of Fir, Birch, Gooseberry bushes, Rhododendron, Vaccinium, &c. may yet be seen. Then come the small woody or herbaceous flowering plants that are peculiar to the arctic regions, and the Mosses and Lichens attain to the borders of perpetual snow. The last expiring efforts of vegetation here are scarcely different from what is presented by the summits of the Andes, of Caucasus, the Carpathian and Swiss Alps, the Pyrenees, &c., nor from the productions of the extreme northern regions, and the antarctic districts that are divided from Patagonia by the Straits of Magellan. The larger natural floras, however decidedly pronounced their distinguishing characters may be, when, under the influence of a favourable climate, they display all their richness and variety of form, are insensibly reduced, by the effect of a gradual diminution of annual temperature, to a small number of families and of genera, whose specific types are, everywhere, if not the same, yet so much alike, that botanists themselves are often tempted to confound them.

The aspect of the southern boundary of Thibet is wild and melancholy. High plains,

bounded on all sides by chains of mountains, surmounted by enormous peaks that are covered with perpetual snow, often present the traveller with nothing but those saline incrustations and metallic substances which induce an almost absolute sterility. No large vegetable productions can be seen, only a few herbs and shrubs, whose stunted growth denotes the congenial nature of the soil. In some districts the land is rather better, and is either covered with spontaneous forests and verdure, or brought into cultivation by the hands of man. The winters are long and severe; for three whole months, the inhabitants are immured in their villages by the heavy snows; and the summers are scorching, the sides of the mountains reflecting back the sun's rays with extreme force. In valleys that are about 9300 feet high, such as those which intersect the Himalayah chain and the Mount of Cailas to the west, Rice, Wheat, Barley, Mulberries, and Opium Poppies are cultivated. There are also some extensive vineyards, rivalling, in the excellence, size, and flavour of their produce, the grapes of Cabulistan. Apricots, Walnuts, and Apple trees grow in the forests.

There are certainly some remarkable discrepancies between the climate of the eastern and western parts of Thibet. The former, of less elevation, and nearer the tropics, has, like the equatorial zone, its periods of rain and drought; and it is probable that the winter temperature is generally lower there than in Kounawur, though the cold be very severe.

The Alps of Thibet, like those of Nepal and Boutan, produce Spruce, Fir, Juniper, Oak, Hazel, Alder, Willow, Birch, Elder, Horsechestnut, Ash, Ilex, Gooseberry, Raspberry, Rhododendron, Vaccinium, &c.

Himalayah and Thibet bring us to the western frontier of China, where we meet with the Transition Zone. But what positive information can be given as to the vegetation of a country, which the unalterable manners, and, as it were, the very instinct, of its inhabitants shut out from the rest of the world, even more completely than could be effected by trackless seas, howling deserts, or mountains of greater elevation and asperity than the alps of the Himalayah?

SUBSECT. 3.—*Zoology.*

The native zoology presents a vast field for observation; and although many parts have been explored by Europeans, there still remain entire provinces which have never yet been visited by the naturalist. Pennant brought together all the information which was known in his time; but the revolutions in nomenclature, which more enlarged views of natural science have since occasioned, and the important discoveries since made, have now rendered the "Indian Zoology" of little service to the modern naturalist. It is not a bare list of animals, with their scientific names, that is now wanted, but rather information on the geographic range and the natural economy of each, viewed in reference to the peculiarities of the countries they respectively inhabit. The publication of the voluminous materials, collected by General Hardwicke, during a long residence in British India, will materially illustrate these questions. In the mean time, the following brief notices on the chief peculiarities of Indian zoology, will not be uninteresting to the general reader, as tending to illustrate our previous remarks on the distribution of Asiatic animals in general.

The Quadrupeds which appear to characterise more particularly the regions of continental India are the following. They are arranged under those divisions of the peninsula where naturalists inform us they are chiefly found:—

1. *Hindostan generally.*

Genetta fasciata. Banded Genett.
Mus giganteus. Gigantic rat.
Cercocebus radiatus. Radiated Monkey.
Papio apedia. Thumbless Baboon.
Papio niger. Black Baboon.
Rhinoceros indicus. Indian Rhinoceros.
Pteropus pallidus. Mottled Bat.
Ursus malayanus. Malay Bear.
Ursus labiatus. Thick-lipped Bear.
Mangusta Mungos. Indian Ichneumon.
Prionodon? albifrons. White fronted P.
Leo asiaticus. *Sussins.* Asiatic Lion.
Felis Tigris. Royal Tiger.
Felis venatica. Maneless Hunting Leopard.
Cervus porcinus. Brown Stag.
Raphicerus acuticornis. Sharp-horned Antelope.
Antilope cervicapra. Common Antelope.
Raphicerus subulata. Awl-horned Antelope.
Gerbillus indicus. Indian Gerbil.
Hystrix fasciculata. Pencil-tailed Porcupine.
Hystrix macroura. Long-tailed Indian Porcupine.
Tetracerus Chicara (*H. Smith*). Chicara Antelope.
Tetracerus quadricornis. Four-horned Antelope.
Nemorhedus Duvancelii (*H. Smith*). Duvancell's Antelope.
Bos Bubalus. Common Buffalo.
Bos Gaurus. Gaur Buffalo.
Bos Gaveus. Gayal Buffalo.

2. *Bengal.*

Cercocebus cynosurus. The MaRhonck.
Nycticebus bengalensis. Slow Lemur.
Nyctinomus bengalensis. Bengal Bat.
Pteropus marginatus. Bordered Bat.
Genetta Boudar. Boudar Genett.
Viverra prehensilis. Prehensile Viverra.
Manis crassicaudata. Short-tailed Manis.
Cervus hippelaphus. Great Rusa.
Cervus Aristotelis. Black Stag.

3. *Pondicherry.*

Pteropus Leschenaultii. Spotted Bat.
Sorex indicus. Indian Shrew.
Lutra Nair. Pondicherry Otter.
Viverra Typus. Common Viverra.
Mus indicus. Indian Rat.
Mus Perchal. Perchal Rat.

From the foregoing list, it would appear that the carnivorous quadrupeds, in regard to the number of species, are very small; and that this fact tends to invalidate the position, previously advanced, that the chief peculiarity of Asiatic India, when compared with America, appears to be the abundance of its ferocious quadrupeds. It must, however, be remembered, that numerical quantities must be taken into the account; for it is quite immaterial to the question, whether that abundance is occasioned by number or by species. To illustrate this farther, we may state, that during two years and a half spent in traversing the forests of Brazil, with the sole view of investigating its productions, we never once saw, or procured, a ferocious animal: so thinly do they appear scattered in that empire, or, at least, over such provinces as we visited. Now, the Tigers of India are well known to be so numerous, that it is impossible to enter the woods or jungles without seeing the print of their feet, or incurring

the danger of their attack. Even the common people employed in agriculture are frequently alarmed by their appearance, and fall a prey to their ferocity, close to human habitations; neither can the abundance of these terrific animals be traced to a thinness of population, in respect to which the interior of Brazil is much more deficient. If the accounts of Oriental travellers are to be relied upon, the proportion of population between the two regions may be no greater then one to five. The "next neighbour" to a Brazilian of the interior frequently resides at a distance of thirty miles, and often of a two days' journey, particularly in the central province of Matto Grosso, or the "Great Wood."

A brief notice of the following quadrupeds will be interesting or instructive:—the Rhinoceros, the Tiger, the Ichneumon, and the Antelope.

The Indian one-horned Rhinoceros of the continent (*fig.* 613.) is distinct from that of the islands. Thicker and more unwieldy for his size than the Elephant, he exhibits in confinement much of the singular sagacity observed in that gigantic animal. A young one described by M. Cuvier, and which was lately alive in Paris, evinced many such habits. He smelt at every thing, and seemed to prefer sweet fruits, and even sugar itself, to any other food. Like the elephant he collected and held every thing intended for his mouth with the moveable upper lip; and when he ate hay, he formed it first into little bundles, which he placed between his teeth by means of his tongue. The nature of its hide has been much exaggerated by old writers. The whole body is covered with a very thick tuberculous grayish skin, nearly naked, and disposed in irregular folds, under which it was flesh-coloured: over this, particularly on the tail and ears, were scattered a few stiff thick hairs. But it is in a wild state only that the bodily powers of this creature can be fully estimated: and these are frequently displayed in a surprising degree. A few years ago, as Major Smith relates, a hunting party of Europeans, with their native attendants and elephants, met with a herd of seven; apparently led by one, much larger and stronger than the rest. This boldly charged the hunters. The leading elephants, instead of using their tusks as weapons, suddenly wheeled round, and received the thrust of the Rhinoceros's horn on the posteriors: the blow brought them and their riders to the ground. No sooner had they risen than it was repeated, and in this manner did the contest continue, until four of the seven were shot, when the rest retreated. This anecdote shows the tremendous power of the Rhinoceros, sufficient to overcome the active ferocity of the lion and the ponderous strength of the elephant; but this is only exerted in self-defence. The Rhinoceros derives all his food from the vegetable kingdom, and is quiet and peaceable if left to himself.

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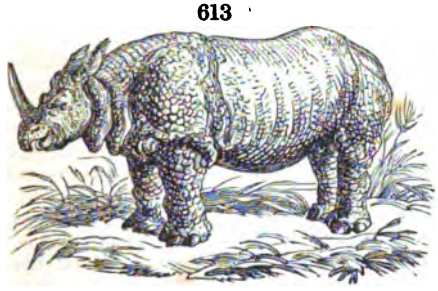

Rhinoceros.

The Bengal or Royal Tiger (*fig.* 614.) is the scourge of Asia and the Indian islands. Equal in size to the Lion, though generally inferior in strength, it wants not courage or ferocity to attack the king of beasts; a temerity which generally proves fatal. Ferocity cannot be more horridly developed than in the Tiger: it may, indeed, be termed a sanguivorous animal, for it will suck the blood of its victim previously to eating it, and will seize on any other that may come in sight; treating it in the same way. Its horrid avidity is such, that, while so engaged, it will almost bury its head and face in the reeking carcase of its prey. According to Marsden, the tigers in Sumatra are so abundant, that whole villages are sometimes depopulated by them. Yet, from a superstitious prejudice, it is with difficulty the natives are prevailed upon, even by large rewards, to use means for their destruction, until revenge for some loss in their own family bursts the shackles of fanaticism under which they habitually sink.

614

Bengal Tiger.

The Indian Ichneumon has some resemblance to the weasel, and is called by the natives *Mangouste*. Its total length, with the tail, is about two feet. It feeds entirely upon small animals, particularly birds, and, for its size, appears as voracious as the tiger. Although capable of being tamed, and even taking pleasure in the caresses of its master, it becomes extremely ferocious at sight of those little animals which constitute its prey. If within reach of a bird, it will spring forward with a rapidity which the eye cannot follow, seize its victim, break its head, and then devour it with the utmost voracity. This animal lives in holes, or in burrows, near habitations.

The four-horned Antelopes (*fig.* 615.) (for there are probably two species) are peculiar to India. That which is named Chickara inhabits the forests and hilly tracts along the western provinces of Bengal, Bahar, and Orissa. It is a delicate-shaped, wild, and agile little creature, measuring about twenty inches and a half high from the shoulders. Its general colour is bright bay above, and whitish beneath. The form of the horns is simple; the largest pair being three inches long, and the others only three quarters of an inch.

615

Four-Horned Antelope.

The Birds, as we before observed, are numerous; but, however interesting to the scientific naturalist, there are few which demand, in this place, a particular description. The Peacock is the glory of Indian ornithology. The Jungle Cock (*fig.* 616.) is spread over the whole of this peninsula, but is replaced, in the islands, by other species: it is perhaps more beautiful than that domesticated in Europe. The Oriental Pigeons vie with the Parrots in the brilliancy, yet softness, of their tints. There are no less than twenty-one species described as inhabiting the continents of India, and eleven more are peculiar to China, Molucca, and the islands. It is singular that this family, in point of species, is distributed in the two hemispheres in nearly equal proportions; twenty-four being described as American, and thirty-one as Asiatic: most of the latter have the ground colour of their plumage bright green, and principally belong to the genus Ptilonopus *Swains.* The gigantic Cranes have already been noticed, as well as the groups of such smaller birds as are sufficient to indicate the nature of the whole.

616

Jungle Cock.

The Peacock appears to have been introduced into Greece about the time of Alexander. It is without doubt the most superb bird in creation, although a familiar acquaintance with its form takes something from that admiration which it would otherwise excite. It is said to occur in the greatest profusion over the extensive plains of India, where it grows to a much larger size than with us. It appears, nevertheless, to be a shy bird; and domesticated individuals are sometimes of a pure white colour. It has been asserted, that the natives have the following very curious mode of catching these birds. A kind of banner is prepared, lighted by candles, and ornamented with painted figures of Peacocks. This is carried, during the night, and held up to such trees as are known to be their roosting-places. The birds, dazzled by the light, and deceived by the figures, repeatedly stretch out their necks, till they become entangled in a noose, fixed on the banner: the fowler then draws the cord, and secures his game.

The domesticated animals may be briefly enumerated. The Asiatic Elephant, long confounded with that of Africa, may be at once recognised by its much smaller ears. Its services appear universal, and it is as essential to the Indian sportsman as a good horse is to an English fox-hunter. Domestication has so far counteracted the instinct of nature, that tame elephants are employed to catch and decoy their wild brethren. The Oxen are all of the humped breed; and the Buffalo is chiefly employed in agriculture. The Asiatic Sheep, in general, observes Major Smith, are partly of the same broad-tailed races as are found in Africa. There is, however, another breed in India, rather high on the legs, with moderate curved horns, and a collar of hair reaching to the shoulders; the tail is more hairy than the body, and reaches below the houghs: this variety is also found in China.

SECT. III.—*Historical Geography.*

The name of India has always been celebrated in the Western world, not only as a region abounding in rich products, but as an early seat and fountain of civilisation and philosophy. Whatever literary talent or application, however, the Hindoos might possess, none of it was turned to history; of which only some faint traces appear, amid the most extravagant fables. The first authentic notice is afforded by the invasion of Alexander; but that event, so celebrated in Greek history, was a mere partial inroad, producing no lasting effects. Yet the narratives of this expedition are precious, in so far as they show that the Hindoos were then precisely the same people as now; divided into castes, addicted to ascetic superstition, religious suicide, and abstruse philosophy. It does not appear that India was then the seat of any extensive empire; but it was divided among a number of smaller states. The expedition of Seleucus and the embassy of Megasthenes brought to light the existence of a great empire, of which the capital was Palibothra, on the Ganges; but the histories neither of the East nor of the West convey any details of the dynasty which reigned in that mighty metropolis. The interposition of the hostile monarchy of the Parthians cut off all communication between Rome and India, though one embassy from the latter country is said to have reached the court of Augustus.

The Mahometan conquest by the Gaznevide dynasty formed the era at which a regular series of authentic history commences for India. The bold and rough population who inhabit the mountains of Afghanistan enabled Mahmoud the Great to unite all the west of India, with Khorasan and great part of Tartary, into one empire. His dynasty, indeed, was subverted by that of Ghori, which was followed by the long series of the Patan emperors. In 1398 they were vanquished by Timour; but it was more than a century afterwards that Baber founded the Mogul empire, which, extended under Akbar and Aurengzebe, displayed a power and splendour scarcely equalled by any monarchy even of Asia. Along with Afghanistan, it included nearly the whole of Hindostan, except some obscure corners and mountain districts; and even all these, more or less, owned its supremacy. The sway of Aurengzebe extended probably over 80,000,000 souls, while his treasure was estimated at 32,000,000*l.*; a sum equal in value to nearly triple the same amount in this quarter of the world.

The empire of Aurengzebe was soon undermined by disputed succession and effeminate habits among his descendants; it was shaken by the rise of the Mahratta power, and in 1738 it was overthrown by the successful invasion of Nadir Shah. Nadir carried off all the treasures of Delhi, estimated by the lowest computation at 70,000,000*l.* sterling. Yet he returned to Persia, leaving to the Mogul all the territory east of the Indus; but from that moment the Mogul empire remained the mere shadow of a mighty name. All the tribes which, during its day of power, had taken refuge in the mountains, now descended to dispute its finest provinces; even private adventurers raised themselves into sovereigns. Among those tribes were pre-eminent the Mahrattas, who, from the Vindhya mountains, and the head of the western Ghauts, had already over-run the north of the Deccan, and now penetrated to the imperial provinces of Delhi and Agra; while, in the south, Hyder Ali erected the powerful kingdom of Mysore. A shadow of the Mogul name was preserved only by the policy of rival chiefs, endeavouring each to draw round himself the reverence which that name still commanded. A new power appeared in the field. Ahmed Shah, who had raised himself to the throne of Cabul, entered India, and completely defeated the Mahrattas in the great battle of Panniput. But while these chiefs contended thus fiercely for empire, a new power was rising, beneath which they were all destined to bend.

The European powers, in exploring through many dangers the passage by the Cape of Good Hope, had made it their first object to gain access to the splendid commerce of which India had always been the theatre. To carry it on with security, and protect themselves against the violence and extortion of the native powers, fortified factories were perhaps indispensable. This step, once made, soon led to further acquisitions. The Portuguese, under Albuquerque, began a career of conquest, and founded, at Goa, a species of kingdom, which, however, fell soon into decay. The other nations long confined themselves to commercial pursuits. The vast commerce of England was protected, in Bengal by Fort William, in the Carnatic by Fort George, and in the West by Bombay, on the Island of Salsette; while the French fixed the chief seat of their power at Pondicherry. The triumphant war of 1756 gave to England a decided pre-eminence in India over the other European powers. About the same time she began to acquire territorial possessions in Hindostan. Her first enterprises were on the side of the Carnatic; but there she was long held in check by the vigour and power of Hyder Ali. In Bengal her military career opened under the darkest auspices. Surajah Doulah, the soubah, invested Fort William with a large army, and, having forced it to surrender, threw the small garrison into that horrid dungeon, named the Black Hole of Calcutta, where the greater part of them perished. Soon after, however, Lord Clive arrived with a reinforcement, and, having taken the field, proved, in the battle of Plassy, how superior a small body of English were to the undisciplined numbers of the East. The soubah was deposed, put to death, and succeeded by his general, Meer Jaffier, who was destined to rule altogether as the vassal of the English East India Company. Not being found sufficiently compliant with the tenure, he was superseded, as were others in succession, until 1765, when the Company assumed to itself, under a nominal reference to the Mogul, the entire sovereignty of Bengal, Bahar, and Orissa. At the same time the victories gained over the Nabob of Oude extended the virtual dominion of Britain nearly to the Jumna. Meantime the Carnatic was a scene of the most bloody and obstinate struggles, especially with Hyder, by whom the British dominion was repeatedly brought to the brink of destruction. Being threatened, however, by the Mahrattas, and vigorously pressed by Sir Eyre Coote, that chieftain at length entered into a treaty of peace. His son, Tippoo, though brave, did not inherit the policy or experience of his father; and, after two obstinate wars, his career was terminated in 1799: Seringapatam was taken, himself killed, his kingdom appropriated by Britain in full sovereignty, or divided among her vassals. Such vast acquisitions, however, placed that country in open rivalry with the Mahrattas, whose power, now completely pre-eminent above that of the Mogul, extended over all the central provinces. In 1803, while the Marquess Wellesley was governor-general, this rivalry broke out into open war. The bold and comprehensive plan of the campaign formed by that statesman, seconded by the military talents of Lake and Sir Arthur Wellesley, who, on the field of Assaye, con-

spicuously displayed those talents which afterwards made him the first captain of the age, completely broke the power of that formidable confederacy. The Peishwa, its nominal head, was indeed replaced in his supremacy over the military chiefs who had assumed independent power; but an auxiliary force stationed at Poonah, his capital, ensured the administration of every thing according to the mandate of the council at Calcutta. The British, after making a pecuniary provision for the last representative of the Mogul dynasty, took into their immediate sovereignty Agra and Delhi, the once proud capitals of India; and there remained only in the northern and western extremities a few states who were not their subjects, allies, or tributaries. In 1817, a new war was undertaken for the reduction of the Pindarees, a rude lawless tribe, harboured in the recesses of the Vindhya mountains. Though attempting only a flying and predatory warfare, they spread so wide, and caused such desolation, that the Marquess of Hastings conceived their suppression to be indispensable for the tranquillity of India. The opening of the campaign, however, gave occasion for the great Mahratta chief Holkar, the Peishwa, and the Rajah of Berar, to shake off the yoke, on which the contest assumed a very formidable character. The Peishwa was at length vanquished, and obliged to retire upon an annual stipend of 100,000*l.*; while the other two chiefs were reduced to a state of entire vassalage, and the British sway over Hindostan was more firmly established than at any former period. It was still further extended by an unsuccessful attempt at resistance made by the Rajah of Nepal. That prince, however, though humbled, retained his independence; and his territories, with those of the Seiks, in the west, are at present the only parts of India not placed completely under the control of the British.

SECT. IV.—*Political Geography.*

India has, for many successive ages, been the theatre of absolute empire, exercised by foreign military potentates. It presents, however, many peculiarities distinguishing it from a mere ordinary despotism. The basis of its population still consists of that remarkable native race who, during a subjection for thousands of years, have retained, quite unaltered, all the features of their original character. They preserve in full force that earliest form, a village constitution, their attachment to which seems only to have been rendered stronger by the absence of every other political right and distinction. The village, considered as a political association, includes all the surrounding territory from which the inhabitants draw their subsistence. Not only the public services, but all trades, with the exception of the simple one of cultivating the ground, are performed by individuals who hold them usually by hereditary succession, and who are paid with a certain portion of the land, and by fixed presents. The principal of these are the *potail*, or head man of the village; the police officers, with servants under them; an officer whose business it is to understand all local rights and boundaries, and to be the arbiter of disputes respecting land; the superintendent of watercourses; the brahmin; the astrologer; the village register; the smith, carpenter, poet, musician, dancing girl. So deep is the principle of this association, and so strong the feeling of the rights connected with it, that it has remained unaffected by all the storms of revolution which have passed over India. Even after the inhabitants of a village have been obliged to flee before the devastation of a successful invading army, they have never failed, on the return of peace, to seek their native spot, and have been allowed, without controversy, to resume their occupancy. "Infant potails," according to Sir John Malcolm, "the second and third in descent from the emigration, have in many cases been carried at the head of these parties. When they reached their villages, every wall of a house, every field, were taken possession of by the owner or cultivator, without dispute or litigation among themselves or government; and in a few days every thing was in progress, as if it had never been disturbed." Such is the strength of this principle of union, that a wise ruler, even the most arbitrary, in levying a revenue or demanding services of any kind, has found it the most expedient method to apply to the heads of the village, and delegate to them the task of collection and apportionment. In rural or hilly districts, the collection of the revenue was confided to a class of officers called *zemindars*, who acquiring by degrees an hereditary tenure, and being merely obliged to pay a certain fixed rent came to be viewed as proprietors burdened with a high land tax. Being intrusted at the same time to a great extent with the administration of justice and police, and having a force under them for that purpose, they became in a manner the feudal lords of the district. Under them the immediate cultivators were the *ryots*, who, either by original right or long established usage, held the lands, so long as the rent was paid, in undisturbed tenure, which descended from father to son without alteration.

The classes now enumerated belong all to the Hindoo population, and, so long as they are permitted to move unmolested in this circle, they quietly behold all the high places occupied by any people, however strange or foreign, with whom rests the power of the sword. They have no idea of political rights or privileges, of a country or nation of their own, and in whose glory and prosperity they are interested; they never converse on such subjects, and can scarcely be made to comprehend what they mean. Their only political bond is to a chief who possesses popular qualities, and attaches them by pay and promotion: to him

they often manifest signal fidelity, but are strangers to every other public feeling. Despotism is not only established by long precedent, but is rooted in the very habits and minds of the community. Such habits naturally predispose the people of a fertile region, bordered by poor and warlike tribes, to fall into a state of regular and constant subjection to a foreign yoke.

The power, as we have seen, which for many centuries ruled over Hindostan, was Mahometan. The votaries of Islam, as usual, entered India sword in hand, announcing proscription and desolation against all who should profess a faith opposite to their own; but while by these unlawful instruments they had converted the whole west and centre of Asia, in India their religion never made the slightest impression. The Hindoos opposed to it a quiet and passive, but immoveable resistance. The conquerors, finding in them such a fixed determination upon this point, while on every other they were the most submissive and peaceable subjects, allowed their own bigotry to be disarmed. With the exception of Aurengzebe and Tippoo, they have long left the votaries of Brahma in the unmolested possession of their faith, and of the various observances with which it is connected. The Mahometans have been reckoned at nearly 10,000,000, or about a tenth of the population of Hindostan; but in this number we suspect that those of the kingdom of Cabul have been included, and that it is only in the provinces on the western frontier that they enter largely into the mass of population. They do not appear to have employed themselves as cultivators, or in the fabrics of the country. They consisted almost solely of the troops maintained by the Great Mogul, and officers employed by him, who, with their families and posterity, swelled gradually into a numerous people. The residence of the Mogul was rather a great moving camp, than a fixed metropolitan city. Delhi, Agra, or any other places, which his abode caused to rank with the most splendid cities of the East, when deserted by his army and train, sunk into towns of secondary magnitude. The great lords who were once his courtiers, counsellors, and the commanders of the troops, were called omrahs, of whom there were four principal. They were supported, not by pay, but by certain portions of land assigned to them, of which they drew the revenues. The provinces were governed also in a military manner by soubahs, who, like other despotic viceroys, exercised within their own limits all the authority of the Mogul. In many cases, they came gradually to regard those territories as belonging to them by a sort of hereditary right; and, on the breaking up of the empire, openly erected themselves into independent rulers. The family of Hyder was Mahometan. That dynasty, however, and almost all the others, have been crushed, by the power either of Britain or by the Mahrattas; and there is now scarcely any other sway in India. The Mahometans have become a subject race.

In contemplating Hindostan, as it now exists, the power of Britain appears entirely predominant. This absolute sway of an island comparatively so small, over an empire of 100,000,000 inhabitants, situated nearly at its antipodes, and accessible only by so vast a circuit of ocean, presents one of the most remarkable phenomena in the history of the world. Yet the subjection is complete, and almost universally peaceable; and the presages of its short continuance, which some entertain, are perhaps chimerical. We have already observed that profoundly passive disposition which prevails among the great body of the nation, so long as no violence is done to their faith, and their ordinary habits are not interfered with. The number of Europeans by whom such vast dominions are held in subjection very little exceeds 30,000. But this number is multiplied by that peculiarity in the character of the Hindoo, which makes it easy to train him into an instrument for holding his own country in subjection. He has scarcely the idea of a country to fight for. "The Asiatic," says Mr. Fraser, "fights for pay and plunder; and whose bread he eats, his cause he will defend against friends, country, and family." Accordingly, the sepoys (Indian troops commanded by British officers, and trained after the European manner) are found nearly as efficient as troops entirely British; and, so long as nothing is done to shock their religion and prejudices, they are equally faithful. Their number amounts to 181,517 men. The purely European troops maintained by the Company do not exceed 8000, but a large body of the king's troops are always employed in India; these at present are about 20,000. The Company doubles the pay of all the king's troops employed within their territories. These forces are variously distributed throughout India; for, besides defending and holding in subjection the territories immediately under British sway, bodies of them are stationed at the capitals of the subsidiary princes, at once to secure and overawe them. The degree of vassalage in which the different states of India are held somewhat varies. The Nizam, or soubah of the Deccan, the king of Oude, the rajahs of Nagpoor, Mysore, Sattara, Travancore, and Cochin, with the representative of the house of Holkar, though they exercise, not without some interference, their internal administration, are entirely under the control of Britain. The Gwickwar in Guzerat, and the numerous petty Rajpoot principalities, are rather friendly allies under her protection. Scindia is still nominally quite independent; but his territories are so enclosed by those of the Company, that, in case of any general movement, he can scarcely act, unless under the dictation of the Company.

[The government of British India is vested in the Court of Directors of the East India Company, under the control of a Board of Commissioners, consisting of several of the chief ministers of the crown, and commonly called the Board of Control. The country is divided into the three Presidencies of Bengal, Madras, and Bombay.* The president of Bengal is styled the Governor-General of India. The Governor-General in Council is empowered to legislate for India, under certain limitations, and subject to the revision of the Board of Control and the Court of Directors. The council consists of four members, beside the governor, appointed by the directors with the royal sanction. The business of the executive is divided among five boards: viz., of revenue; of customs, salt, and opium; of trade; of miliary affairs; and of medical affairs. The other Presidents in Council possess the same authority within their respective governments, but subject in all matters of general policy to the Governor-General, who has the power of declaring war, making peace, and concluding treaties, and, as captain general, may head the military operations in any part of the country, and who may suspend the governors of the other presidencies, and sit as president in their councils.

The British ecclesiastical establishment in India consists of the three bishops of Calcutta, Madras, and Bombay, with seventy-six chaplains.—AM. ED.]

Amid the general conquest and subjugation of India by Britain, the western provinces alone have never as yet come even into hostile collision with that power. The state with which it is in most immediate contact is that of the Seiks, or Sikhs. This remarkable people began their career as a religious sect, adopting a sort of combination of the Hindoo and Mahometan creeds. Their habits were originally mild, abstracted, and almost philosophic; but persecution, and the treacherous and cruel death inflicted on two of their chiefs, roused their fury, and converted them into a race of savage and desperate warriors. While the Mogul power, however, continued in its vigour, they could only avenge their wrongs by hasty and stolen ravages; after which they sought the recesses of the northern mountains. On the dissolution of the great empire, they showed themselves capable of resisting any of the native armies, and were only kept in check by the hardy troops of the king of Cabul. They possess nearly the whole territory of Lahore, or the Punjab, watered by the upper course of the five great rivers which convey to the Indus the waters of the Himalayah; they also possess the northern part of Delhi, as far as the Jumna. Their government forms a species of theocracy, under a body of chiefs uniting the heterogeneous characters of priests, warriors, and statesmen. Of these a grand national council is held at Amritsir, the sacred city of the Seiks, in which, after a number of peculiar religious ceremonies, the national affairs are taken into consideration, and a plan of operations suited to the emergency is formed. Disunion has prevailed among these chiefs, but they are now united under the almost absolute sway of Runjeet Sing, who has also conquered Cashmere and a great part of the kingdom of Cabul, including Peshawer, lately its capital. He has fixed his residence at Lahore, and maintains an army of eighty regiments of infantry equipped in the European manner, and disciplined by French officers, though they are led into the field by the hereditary chiefs or khans. The artillery and cavalry are also respectable, and he is supposed to have accumulated a large treasure.

Moultan, composing the lower course of the five rivers, with all the territories along the Indus, including Sinde, its delta, is governed by chiefs formerly tributary to the king of Cabul; but at present subject to Runjeet Sing. This region is separated from Guzerat, and the other fine provinces of central Hindostan, by a vast tract of desert. Yielding, however, some coarse grain and pasture, it supports a certain population, and is occupied by a number of rude chieftains, or petty princes, called Rajpoots, who paid even to Aurengzebe only a slight form of submission. At present they are engaged in almost perpetual contests with each other; but no foreign power seems to interfere with them in the possession of these dreary wastes.

The following estimate has been made, in a recent parliamentary paper, of the extent and population of the territories under the immediate administration of the Company:—

	Square Miles.	Population.
Presidency of Bengal	220,312	69,710,071
——— Madras	141,923½	13,508,535
——— Bombay	59,438½	6,251,546
	421,673½	89,470,152

There are, besides, 85,700 square miles in Bengal, and 5550 in Bombay, the population of which has not been ascertained; but, as they consist of rude districts situated on the Upper Nerbuddah and in the Concan, their population is probably not extensive; and British India will not much exceed 90,000,000. Mr. Hamilton has formed, apparently with

*[By the act of 1833, provision was made for the erection of a new presidency at Agra; but by an act of 1835 the Directors were empowered to suspend the execution of this provision.]

some care, an estimate of the population of the subject and independent states. The following come under the first head:—

	Square Miles.	Population.	
The Nizam	96,000	10,000,000	
The King of Oude	20,000	3,000,000	
The Rajah of Nagpoor	70,000	3,000,000	
——— of Mysore	27,000	3,000,000	
——— of Sattara	14,000	1,500,000	
The Gwickwar	18,000	2,000,000	
Travancore and Cochin	8,000	1,000,000	
Rajpoot and various minor principalities	283,000	16,500,000	
			40,000,000

To this list must be added the island of Ceylon, which is a royal colony, and contains, on 24,660 square miles, nearly 1,000,000 inhabitants; making the grand total of British India above 1,000,000 square miles, with a population of 131,000,000 souls.

The states that still remain independent of Britain are thus estimated:—

	Square Miles.	Population.	
Scindia	40,000	4,000,000	
The Seiks (Lahore Rajah)	50,000	3,000,000	
Nepal	53,000	2,000,000	
Cashmere and other districts subject to the Seiks	10,000	1,000,000	
Sinde	24,000	1,000,000	
			11,000,000

It is painful to reflect that the sway of Britain, which has extended so widely over Hindostan, was in the first instance decidedly injurious. The observation applies peculiarly to Bengal, which had previously attained a most flourishing state, under the beneficent administration of Aliverdi Khan. The military adventurers, by whom chiefly affairs were at first administered, aimed directly to fulfil the boundless expectations entertained by the Company from the possession of an empire so famed for wealth, and to return laden with riches to their native country. Every mode of arbitrary exaction and extortion was therefore practised. A larger revenue was raised from the country than it had paid to the Mogul in its greatest prosperity. During that dreadful famine in 1770, when a third of the inhabitants are supposed to have perished, and multitudes of the cultivators fled into other districts, the revenue was still forcibly maintained at its former standard by heavy surcharges on those who remained. Under this system, the finest country in the world was in danger of being rapidly reduced to a desert; and large tracts, formerly covered with waving harvests, were converted into jungle, the abode of wild beasts. The breaking up of the native authorities, without any effective substitute, gave a dreadful extension to the system of *decoity;* a species of robbery, unknown at least in the civilized kingdoms of Europe. It is carried on somewhat after the manner of the predatory tribes, who infest the neighbouring regions, on a great scale, and by persons who are not considered as disgraced by it, either in their own estimation or that of others. They exercise this propensity to plunder, not on their immediate neighbours, but in distant forays, in which they surprise villages during the night, and employ the most dreadful tortures to procure hidden treasure.

It is but justice to the Company to observe, that they appear from the first to have cast an anxious eye on the distressed state of their Indian possessions. Several expedients were tried without success, till, in 1784, Lord Cornwallis went out with full powers, and the foundation was at length laid of an ameliorated system. The leading arrangements were:—A settlement of the landed property was made, first for ten years, but afterwards rendered perpetual; upon payment of which, the zemindars were invested with the absolute property of the lands, having under them the ryots, who, on payment of a fixed rent, were also to maintain their tenures. To secure this property against the encroachments of power, it was rendered unlawful for any European to possess land in India. At the same time, civil and criminal courts on the British model, and administered by British judges, were established; the former in every town, with an appeal to superior tribunals at the cities of Calcutta, Dacca, Patna, and Moorshedabad, and a final resort to a supreme tribunal in the capital. Criminal justice was to be administered by separate judges performing a circuit through the same cities.

Notwithstanding the excellent intentions with which this system was formed, and the good general principles on which it is founded, it has but imperfectly fulfilled the object of restoring the prosperity of British India. Although the annual payments exacted as land revenue were no longer arbitrary, yet they were fixed too high; and, being enforced with the utmost rigour, and by sales of the property on which the arrear arose, they soon produced the impoverishment or ejection of almost the whole body of the former zemindars. The ryots, being too poor to purchase the forfeited lands, were only exposed under this system to new oppressions. The zemindary and village police, which had, though in a somewhat rough way, generally maintained the country in tranquillity and security, were found to be very disadvantageously supplanted by the system, in itself so excellent, of British jurisprudence. That system, administered by young judges who came out with little study, and little view but of making a fortune, was found to exhibit faint traces of its native excellence.

Even the best lawyers have found it a matter of extreme difficulty to judge Indians,—a people whose language, manners, and whole train of ideas are foreign and opposite to those of Europe. The natives, too, are wofully addicted to perjury, and have been greatly encouraged in it by the facility which this ignorance of their judges affords them of escaping detection. Hence the British tribunals are often completely at a stand in cases where the tact and experience of a native judge would at once have unravelled the truth. The consequence has been, that an arrear of civil cases has accumulated, amounting almost to an absolute denial of justice; while, in the criminal courts, it is often necessary, for want of evidence, to dismiss individuals, of whose guilt the most perfect conviction is entertained. Thus, after a long and profound internal peace, under a strong government, and an administration of justice intended to be strictly equitable, the country has recovered only very imperfectly from the state to which it had been reduced by the original system of spoliation. In fact, the exertions of the Company have of late been employed to restore the original system of police and society; and this object, though difficult, has been effected in some degree, and with favourable results. [The natives have for several years been admissible to civil offices, and to act as civil and criminal judges; they are also summoned to sit in the punctayets (native juries), and to try in some places criminal, in others both civil and criminal questions. By the act of 1833, for the better government of the Indian territories, it is further provided, that no native shall, by reason of his religion, place of birth, descent, or colour, be disabled from holding any office or employment under the Company.—AM. ED.]

[For more than forty years a dividend of 10½ per cent. has been paid on the East India stock, although during that whole period no profit was made, and the pretended dividend was paid with borrowed money. In consequence of this state of things, the original value of the stock has been nearly doubled in the market, and by the new charter of 1833, a fund of two millions sterling is set apart to accumulate at compound interest, until it amounts to twelve millions, the price of six millions of stock at ten per. cent.; and the dividend is in the mean time to be paid out of the territorial revenues, that is, out of the purses of the Hindoos. The following is the statement of the company's affairs, in 1832:—

Territorial and Political Debt	£61,197,782
Commercial "	1,998,494
Total Debt	£63,196,276
Territorial and Political Credits	£29,579,523
Commercial "	21,647,149
Total Credits	£51,226,672
Balance Deficient	£11,899,604
Company's Home Bond Debt	3,542,854
Total Deficiency	£15,442,458

The following table shows the income and charges for the five years ending with 1830:

Years.	Revenue. £	Charges in India.	Charges in Bencoolen, Prince of Wales' Island, & St. Helena.	Interest on Debt. £	Charges in England. £	Surplus Charge. £
1826	21,096,960	22,346,365	214,285	1,575,941	1,817,232	4,856,857
1827	23,327,753	21,424,894	207,973	1,749,068	2,429,894	2,484,076
1828	22,818,184	21,778,431	272,014	1,958,313	2,060,141	3,250,715
1829	22,692,711	19,298,622	250,794	2,121,165	1,967,405	945,275
1830	21,662,310	18,300,715	213,304	2,007,693	1,748,740	608,142

AM. ED.]

SECT. V.—*Productive Industry.*

India has always been, in a peculiar manner, celebrated for its fertility, and for its profusion of magnificent and valuable products. In fact, the tropical countries, wherever water abounds, must surpass the regions under the temperate zone in this respect, were it only from the circumstance of producing more than one crop in the year. The large and copious streams of Hindostan maintain generally throughout that country a perennial abundance. This character, however, is by no means universal. All the west of central India, except where it is watered by the Indus and its tributaries, consists of sand, in which the traveller sinks knee-deep. Sand forms even the basis of all the flat country of Bengal; though inundation and culture have covered it with a thin surface of productive clay. A great part also of the hilly districts, being over-run with that species of rank underwood called jungle, is unfit for any useful product. Although the Hindoos, too, have ever been an agricultural people, and remarkable for their industry, nothing can be more imperfect than the instruments, or the skill, with which they conduct that important art. The cultivators, for security under an imperfect police, or from mere custom, live in large villages, having

each a small spot, on the tillage of which they occupy themselves, in conjunction with the labours of the loom and with other employments. Holding their lands by no tenure except that of usage, they never think of expending capital in their improvement, and could not, probably, with safety, show themselves possessed of property. Their plough, in comparison with ours, does not deserve the name. Rudely constructed, at the cost of less than half a crown, it cannot penetrate beyond two or three inches deep, and has no contrivance for turning over the soil. It is drawn, not by horses, but by oxen and buffaloes, sometimes yoked together. The ground, after being scratched in several directions by this instrument, followed by the rough branch of a tree as a substitute for the harrow, is considered fit for receiving the seed. Manure is employed only in some rare cases, and consists merely of ashes and decayed vegetables. Cow-dung is not only scarce, but is accounted holy: it is also employed as fuel, and is even plastered on the walls by way of ornament. There is no idea of any rotation of crops, except the succession to be raised within the year; and this is conducted on a principle of raising the utmost possible quantity, until the ground is completely exhausted. It is then abandoned to a state not of fallow, but of *lay*, and the cattle are pastured upon it, until by continued rest it has regained its fertility. This rude system of husbandry resembles that which was practised in Europe during the early ages. It is not supposed that even in Bengal more than one acre in three is under actual tillage. The cultivators are poor in the extreme, their annual rents on an average not exceeding four pounds; and, instead of possessing any capital, they are usually sunk in debt.

Notwithstanding all these deficiencies, nature is bountiful, and the products of India are copious. Rice is the article upon which the whole region rests its main dependence; it is raised on every spot where irrigation can be procured. The periods of sowing and reaping vary, and produce a corresponding variety in the quality. Only one crop is raised in the year; but with another of millet or pulse on the same field. In some of the western Mahratta districts, it is necessary to substitute *d'hourra*, the arid and coarse grain of Nubia. Wheat and barley are fitted only for those tracts which, from their more elevated site, approximate to the temperate climates.

Hindostan has other highly valuable products. The most important, perhaps, is cotton, the material of the great national manufacture. It is chiefly raised in the inland and somewhat dry tracts of Agra and the Deccan. Mirzapour, in the province of Agra, is the general market for cotton, the price of which varies from 1*l.* 13*s.* to 2*l.* 4*s.* 6*d.* per cwt. It is not equal in quality to the American. Silk is also a very ancient staple of India, particularly of Bengal, though not to the same extent as in China; and the Italian silk is now decidedly superior to both. There is also a wild species brought in from the eastern wooded tracts of Assam and Silhet, which is useful from its cheapness. The continent of India does not produce those more delicate spices which distinguish the islands; but pepper, so extensively used in Europe, grows in the greatest perfection and abundance on the high wooded mountains that rise above the coast of Malabar. Sugar was plentiful in Hindostan before it was known in Europe. The interior of Bengal might yield it to any extent, and at much less expense than that raised in the West Indies; but, from the defective mode of preparation, it is of very inferior quality, and is in that form called clayed, which is not suited to the European taste. Opium, that favourite though pernicious luxury of the East, is the staple of the interior province of Bahar, and is raised of still superior quality in Malwa. It is a precarious crop; and the British rendered it still worse by monopolizing, and then using compulsory measures to make the farmers grow it; but by recent regulations these restrictions have been in a great measure removed. Indigo has been an early product of India, of which it bears the name: but that of Mexico obtained the preference in Europe, until within the last twenty years, when, by the vigorous exertions of some active individuals, it has been so much improved, that it is imported now to a large annual amount. It is cultivated by the ryots upon advances made by the British; but the cleaning and preparing it for use are entirely performed by Europeans, and with machinery of their erection. The average produce of Bengal and Oude, the latter of which is of considerably inferior quality, is estimated at 9,000,000 lbs. Coffee has become an article of considerable importance; and in the year 1831, 3,000,000 lbs. were imported into Britain from Malabar. Saltpetre is produced more abundantly in Bahar than in any other known country. Its formation takes place chiefly during the hot winds, and seems to be connected with that phenomenon.

Besides these luxuries destined for exportation, there are others extensively consumed in the interior. The nut of the areca, combined with the leaf of the betel, is one universally used in India, which has never found its way into Europe. The customs of the country cause a vast consumption of vegetable oils, which are supplied from the sesamum, also from lint, mustard-seed, and the cocoa-nut. Woods of various kinds grow luxuriantly on the lower declivities of the Indian hills. The canes, composing the thick jungle or underwood which abounds in marshy grounds, are not only used as in Europe, but are much employed in building. The teak has been found unrivalled for ship-building; but, though it flourishes on the hills of Malabar, it does not attain such perfection there as in Java and the Eastern peninsula,

Malabar furnishes also a large supply of sandal wood, of the species called red-wood, as well as others used for dyeing, or for ornamental furniture.

The following estimate of the produce of the British Bengal territory, including Benares, Bahar, and part of Orissa, was made, seemingly with great diligence and attention, by Colonel Colebrooke. To appreciate the extreme cheapness of Indian produce, we must observe, that the maund consists of eighty lbs., or within a trifle of an English bushel.

Rice, wheat, and barley, 150,000,000 maunds, at 1*s.* 6*d.* per maund	£11,300,000
Millet, 60,000,000 maunds, at 1*s.* per maund	3,000,000
Pulse, 90,000,000 maunds, at 1*s.* 3*d.* per maund	5,625,000
Seeds	4,038,000
Sugar, tobacco, cotton, opium, and other articles	9,000,000
	£32,913,000

The space on which these products are raised is estimated to contain 160,000 square miles, and 30,000,000 souls. Hindostan, taken altogether, may be quadruple as to extent and population, but not quite so as to wealth. We may, therefore, conjecture its entire produce at about 100,000,000*l.*; but it must be remarked, that the same articles would be considered very cheap in England at six times the prices above stated.

It is not, however, for the natural products alone, but, in an especial degree, for manufactures, that the commerce of India has been so much prized in the Western world. Cotton, her native material, though not possessing any peculiar original beauty, has, by the skill of her artisans, been worked up into forms of dress the most elegant that human industry has ever produced. That of muslins, ingenious and delicate beyond all others, is appropriate and peculiar to Bengal, in whose eastern district of Dacca it is fabricated in a perfection elsewhere unrivalled. Though especially adapted, as it were, for the climate of India, so general has been its attraction, that this delicate fabric has become the staple of Scotland and the north of England. There, by the employment of machinery and the division of labour, it is produced much cheaper, and, in some instances, even of finer texture; but the muslin of India, richer, softer, and more durable, still maintains its reputation. The same superiority is preserved by the calicoes, ginghams, and chintzes, which form the staple manufactures of Coromandel, and particularly of the Circars. Though nearly driven out of the European market by cheap and successful imitations, they are still preferred over the East, where the curious consider themselves able to distinguish by the touch, and even by the smell, these genuine products of the Indian loom. The central and western provinces are not so eminent in manufactures, with the exception of Guzerat, where, especially in Surat and its neighbourhood, they are cheap, good, and of great variety, yet do not attain the same high excellence as in Eastern India.

Silk, though holding only a secondary place as an Indian manufacture, is still ancient and considerable. Its main seats are the great cities of Moorshedabad and Benares, with their neighbouring districts: at Surat, also, the quantity manufactured is considerable. Taffetas, brocades, and embroidered gauzes, are its prevailing forms.

Woollen manufactures are not suited to the climate of that tropical plain of which Hindostan chiefly consists. In the upper regions, however, which form the slope of the Himalayah, they are made in large quantities, though coarse, and for home consumption. Cashmere alone collects that fine wool, peculiar to the goats which feed on the table-land of Thibet; and from this material are manufactured those exquisitely beautiful shawls which Europe has striven to rival, but unsuccessfully, except in cheapness. The shawl manufacture of Cashmere has suffered peculiarly by the revolutions of that country; and the looms employed in it have been reduced from 40,000 to 16,000.

The commerce of India has always possessed, in the eyes of Europeans, a dazzling and indeed illusive splendour, derived from its remoteness, and the brilliant character of some of its articles. It possesses by no means the magnitude or importance which these circumstances have led men to ascribe to it. Besides, though, both in ancient and modern times, it has afforded a grand impulse to trade and enterprise, the Indians have never been a trading nation. They never carried any of their own precious products into other countries; but, disdainfully, as it were, granted them to those who came to seek them from the farthest extremities of the globe. With equal disdain, they rejected almost every article which was offered in exchange, and would except nothing but treasure in its most solid and palpable form. The course of Indian trade was hence a constant theme of regret to those politicians who considered the benefit of this intercourse as dependent solely on what was called a favourable balance, and who viewed India as a gulf in which all the treasures of the West were buried. Modern enquiries have fully shown that this by no means prevented the trade with India from being highly beneficial; though the limited export, no doubt, rendered it less so than it otherwise would have been. Yet the importance of Indian commerce has always been, and is, grossly exaggerated.

The mining operations of India are confined to one object, of so brilliant a character, however, as to throw a lustre on this and on all the Oriental regions. It produces the finest diamonds in the world; for those of Brazil, though of greater size, are inferior in hardness

and brilliancy. The Indian diamonds occur chiefly in a high and rugged tract, inhabited by tribes almost independent, and extending from Golconda across the interior of Orissa. The principal mines are described by Tavernier as situated at Raolconda, Color, and Sumbulpoor. In the first of these places, the diamonds occur in narrow veins traversing the rock, and mixed with the sand and earth which fill their cavities; at Color they are found in the soil of a plain which stretches along the foot of some high mountains; while at Sumbulpoor they are mixed with the sand of the river Gouel, which falls into the Mahanuddy. The diamonds at this last place are exquisitely fine, but small when compared with those at Color, which yielded to Shah Jehan the famous stone, weighing upwards of 700 carats. Tavernier found at this mine alone 60,000 persons employed; but the importance of the working appears to have since diminished, either from the exhaustion of the mines, or the diminution of the demand among the native princes. The sands of the rivers of this tract yield also some gold dust, but not in sufficient quantity to become a national object. The diamonds of Panna, in the district of Bundelcund, are celebrated, though not of such fine quality as those already described. India produces some iron, lead, and tin, though not in sufficient quantities for home consumption. Zinc is in particular abundance; and the same may in some degree be said of these products of calcareous countries, marble, sal-gem, alabaster, common salt both in rocks and plains covered with this mineral; but the great masses of rock salt are to the west of the Indus. Salpetre has been already noticed.

The mode of conducting British commerce with India has always, till very recently, been by means of exclusive companies; and the only competition was between these rival associations. About the middle of the seventeenth century, they were combined into "the United Company of Merchants trading to the East Indies;" by whom, from that time, all the concerns of government and trade were administered. Between 1770 and 1784, the Company were obliged to yield a great share of their political power, which is now jointly exercised by the Board of Control. But no material breach was made in their exclusive privileges as traders till 1813, when the intercourse with Hindostan was thrown generally open to British subjects, with only some restrictions as to the tonnage of the vessels and the ports from which they were to proceed; and even these have been in a great measure removed. Under the liberty thus granted, the private trade has increased astonishingly, and has almost driven that of the Company out of the field. [By the acts of August 28, 1833, for the Better Government of his Majesty's Indian Territories (3 and 4 Will. iv. ch. 85), and for Regulating the Trade to China and India (3 and 4 Will. iv. ch. 93), the commercial privileges of the East India Company are abolished, its functions now being merely political, and the trade to India and China is thrown open to all British subjects. It is further declared lawful for all British subjects to reside in the East Company's dominions without any license, on merely making known to the proper officer, on their arrival, their name, place of destination, and objects of pursuit; and any person so resident may acquire and hold lands, in the parts where he may be authorised to reside, for any term of years, and carry on any trade or profession.

General View of the Commerce of British India, for 1833.

	IMPORTS.			EXPORTS.		
	Merchandise.	Bullion.	Total.	Merchandise.	Bullion.	Total.
Great Britain	£3,614,138	1,310	3,615,448	£3,545,100	570,571	4,115,671
United States	146,696	95,382	242,078	1,348,907	37,764	1,386,671
Brazil	60,680	10,440	71,120	6,744	.....	6,744
Portugal	4,180	.....	4,180			
France	138,289	990	139,169	319,421	337	319,758
Sweden	17,229	.....	17,229	11,962	.....	11,962
Hamburg	2,968	.....	2,968			
Eastern Islands	45,403	39,624	85,027	690,098	62,244	752,342
Arabia, Persian Gulf, N. S. Wales, &c.	45,527	263,237	308,764	817,387	3,172	820,559
China	3,187,981	396,251	3,584,230	4,268,920	71,484	4,340,404
Total	£7,263,091	807,234	8,070,325	11,008,539	745,572	11,754,111

Am. Ed.]

Sect. VI.—*Civil and Social State.*

In surveying the political state of Hindostan, an estimate has already been given of its population, by which it amounts to about 140,000,000. Of this vast multitude, nine-tenths are still believed to consist of that native original race, who, though subject to a foreign power during so many ages, have remained always unmixed, and have retained unaltered their ancient habits and institutions. This people, who have attained a considerable degree of civilisation, though in a form quite different from the European nations, present a highly interesting subject of contemplation.

In their external form, the Hindoos, though, by the action of the climate, rendered as black as the negro, have otherwise nothing of the negro aspect. Neither do they exhibit the broad

and flat visage, nor the other distinctive marks, of the Mongol race who people China and Eastern Tartary. Their form belongs to that variety termed, by Blumenbach, the Caucasian, and which includes also the people of Europe. Even from them they are distinguished by a peculiar delicacy and exility of shape, suggesting the idea of a refined, and even effeminate people. The races, however, bred to war, who inhabit the mountains and the western tracts, are of a bodily constitution much more hardy and athletic.

The manners of the Hindoos, still more than their persons, bespeak peculiar refinement. They are described as in a remarkable degree polished, graceful, and engaging; and in the whole intercourse of society, a politeness and urbanity reigns, much beyond what is observed in European circles. The impression made by them upon a stranger is that of a benevolent and amiable people. Those gentlemen, however, who have of late communicated the results of more intimate inspection, present a much less favourable picture. That outward politeness, it is said, soon resolves itself into the smooth and interested servility which men acquire in courts and under despotic governments, by habitual intercourse with those on whom they are dependent. It is entirely prompted, therefore, by self-interest, which forms the basis of the Hindoo character, and is cherished without regard to any feelings of honour and dignity. These are entirely broken down by the influence of that despotism which, according to Mr. Grant, "is not only the principle of the government of Hindostan, but an original, irreversible, and fundamental principle in the very frame of society." In such a government, where men are excluded from the pursuits of ambition, and checked at least in any public or lively amusements, selfishness turns almost entirely into avarice; and this is described as quite the ruling passion in the breast of the Hindoo. It appears to be indulged with an almost total disregard of the principles of honour or honesty; the grossest breaches of which are so common, as to cause no surprise, and scarcely any indignation, even in those who suffer by them. In the same light do they regard that deliberate and systematic violation of truth, which seems rooted in the Indian character. "It is the business of all," says Sir John Shore, "from the ryot to the dewan, to conceal and deceive; the simplest matters of fact are designedly covered with a veil which no human understanding can penetrate." This extends even to a form of guilt, from which the religious, or rather the superstitious, habits of the nation, might have been expected to secure them. Perjury, the most deliberate and complete, marks every deposition made before an Indian court of justice. What involves the tribunals in particular perplexity is, that even those who mean well, and have truth to tell or to attest, think not that they do enough, unless they enforce it by false additional particulars; and it would thus be impossible for courts of justice to carry on their investigations, if they should reject evidence because it was combined with the most palpable falsehoods and perjuries. On a close inspection, too, much disappears of the mildness and quietude which are so conspicuous on the surface of the Hindoo character. Deadly feuds reign in the interior of villages; and, between those who have no motive to be on ceremony or on terms of courtesy with each other, violent wordy altercations often take place, seldom, however, proceeding to blows. In particular, the already mentioned prevalence of *decoity*, and the dreadful cruelties with which it is accompanied, go far to strip the Hindoo character of its fame for gentleness. Similar habits of violence are general among the predatory tribes of the West: but these indeed may be considered as differing in almost every point from the proper Hindoo character.

After all, the Hindoo certainly possesses some good qualities; and, perhaps, the late very unfavourable pictures are drawn chiefly from the populace of great cities, and from men otherwise placed in situations trying to human virtue. It is admitted that, in fidelity to a master or chief from whom they have received treatment at all kind, they are surpassed, and indeed equalled, by very few nations. Their religion enjoins, and it is admitted that they perform, very remarkable acts of beneficence; and to assert that these proceed merely from a mercenary view of purchasing heaven, would be to judge with rather a scanty measure of charity. The habits of Hindoo life are pre-eminently domestic. Respect for old age is carried to a great height; and, when parents are no longer capable of labour, they are supported by their children, and never allowed to become a burden on the public. Marriage is held as a perfectly indispensable part of life, without which a man would not be considered as possessing a regular place in society, or as qualified for exercising any important function. His marriage, and his marriage festival, are regarded as the most critical and splendid eras in the history of a Hindoo. Yet the wife, when obtained, is the object of very slight respect or regard. She is considered wholly unfit to be the companion of her husband, or even to be spoken to; and indeed care is taken to render her so. It is deemed disgraceful for her ever to open a book, to be able even to read a syllable, or to know any thing of what is passing in the world. She is regarded merely as a sort of privileged slave, created only to obey and reverence her husband, and bound to view him with the most reverential awe. She is generally, however, faithful to him; and her attachment is manifested in an extraordinary and cruelly superstitious manner, by the sacrifice of herself on his funeral pile. Although a variety of motives may co-operate, this sacrifice would scarcely have become so prevalent, had not the principle of conjugal attachment been generally strong in the

nation. Polygamy does not widely prevail; and dissolute manners, though strangely combined in many instances with religious observances, do not seem to be otherwise so general as in most parts of Europe.

The religion of India, such as it is, reigns with unrivalled sway, and forms the basis of all its laws and institutions. It is not merely the object of internal meditation or occasional observance, but the guide in all the actions, outward and inward, small and great, of human life. This, however, which, in an enlightened and rational sense, might be considered as marking a peculiar excellence, is combined, in the vulgar at least, with habits of gross ignorance and mean superstition. Yet the Hindoo system fails not to comprise some very lofty elements; but these, being chiefly confined to the sacred books, which are inaccessible to the vulgar, have little influence on the general ideas of the nation.

The Hindoo mythology is a system so vast and multifarious, that to introduce even a sketch would, within our limits, be scarcely possible. It is founded on the grand and philosophical idea of an immense all-pervading mind, from which the universe derived its existence. To this Nature, which is called the Bramh, or Brimh, they ascribe the most exalted attributes of power, wisdom, and beneficence. This being, however, is not represented as the active ruler of the universe, but as fixed in sublime and perpetual repose. He did not even, strictly speaking, create finite natures, but emitted them, as it were, out of his own substance, into which those which are most perfect will again be absorbed. Thus sprung the Hindoo triad, Brahma, Vishnu, and Siva, the supreme objects of popular worship. Brahma, though the highest in dignity, and manifesting even the qualities of the source from which he emanates, is comparatively little regarded, has no temples raised, and no national worship paid to him. Vishnu is the most active member of the triad. His nine fulfilled incarnations, and his tenth expected one, are prominent epochs in Hindoo mythology. On these occasions he appeared sometimes as a man, sometimes as a boar, a lion, or a tortoise, to deliver oracles, to destroy giants, and deliver the earth from the evils that oppressed it. In two of them he appeared as Rama and as Krishna, names which have almost superseded his own; and under the last appellation, by his extravagant amorous adventures, he has afforded ample theme to the luxuriant fancy of the Hindoo poets. As Vishnu is called the preserver and saviour, so Siva bears the title of the destroyer, and in that character has a numerous class of peculiar worshippers. He is usually represented under a form calculated to inspire terror, of gigantic size, naked, riding on a bull, his eyes inflamed, and serpents hanging from his ears like jewels. Wars with the gods and extermination of giants form the leading events of his history, which, as well as his worship, comprises some peculiarly indecent adventures and observances.

Among inferior deities, the first place is held by Indra, bearing the lofty title of "king of heaven." This high place is maintained only by perpetual contests with the Asuras and Raksasas, the giants and Titans of India. He is even liable to be ejected by Bramins skilled in mighty magic, or by a king who can sacrifice an hundred horses that have never felt the rein. Other objects of worship are Kartikeya, god of war; Surya, the sun; Pavana, the god of the winds; Varuna, of the waters; Yama, the holy king who judges the dead,—a green man in red garments, and of terrible aspect, who keeps his court in the deepest mountain recesses, and at the hour of death extorts shrieks of terror from the guilty Hindoo. Juggernaut, or Juggannatha, considered an earthly deity, is distinguished by crowded pilgrimages, and by the frightful character of the worship paid to him. The rivers of India are also accounted divinities, particularly the Ganges, which is supposed to descend from heaven, and the affusion of its waters to purify from all sin. That the lowest forms of superstition may not be wanting, the worship of animals is extremely prevalent. The cow, above all, is held in deep and general reverence, and by many families one is even kept for the mere purpose of worshipping it. Next ranks the monkey, whose exploits are largely celebrated in the sacred books. It is considered a pious disposal of money to expend large sums on the marriage of monkeys.

The religious observances of the Hindoos do not tend to give a higher idea of their wisdom than the creed on which they are founded. India is covered with temples, but those recently erected display nothing of that art, or even of that magnitude, which astonish us in those of Egypt and Greece. A temple may be built for twenty pounds; and the largest does not cost more than one hundred, or contain above three apartments. The rich seek to distinguish themselves by planting a number together: one pious lady has covered a plain near Burdwan with no fewer than 108 temples. Every temple must have its image, made of gold or silver, or, in default of these, of iron, brass, lead, or tin, sometimes even only of clay and pottery. The deity is manufactured by the workers in these metals and materials, and without the display of any skill in the art of sculpture: after its completion, the Brahmins, by sundry ceremonies and invocations, are supposed to infuse the spiritual character. The person who builds the temple makes a grant for the support of its servants, among whom, besides Brahmins, it is necessary, in many parts of India, that there should be a certain number of courtesans; a truly singular instance of depravity in a people among whom female virtue is otherwise respected. The religious festivals are often prolonged for several

days, with music, dancing, revelry, and various excesses which are proscribed by Hindoo manners on all other occasions. The rage for pilgrimage is universal, and is in itself, indeed, rather the most venial form of superstition, since it affords considerable opportunities both of information and commerce. The great periodical festivals at Hurdwar and Juggernaut attract millions, but are often accompanied with considerable sacrifice of human life. The bloody scenes at Juggernaut are well known: in these the frantic victims of superstition throw themselves under the wheels of the car (*fig.* 617.) in which that idol is drawn furiously along, and fondly imagine that they thus secure a happy futurity. Another mode of religious suicide is by drowning in holy waters, particularly those of the Ganges, and at the island of Sagur. Parents sacrifice their children to the Ganges, or to any power whom they wish to propitiate; but this savage practice was prohibited by the Marquess Wellesley, and his order has been obeyed without resistance or murmur. It is not known from what motive a race of Rajpoots, in the west, have been induced to immolate all their female children. The number of these victims has been estimated at nearly 20,000; and the effects of the benevolent exertions of Colonel Walker for the suppression of this horrid practice, which were, at least in a great measure, successful, have not been permanent. Religious feeling, however, certainly enters into that fatal sacrifice by which the Indian widows are induced, and sometimes even compelled, to sacrifice themselves on the funeral pile of their husbands. This practice also was, in 1829, prohibited by a proclamation of Lord William Bentinck; a measure applauded by all the enlightened Hindoos, though it has excited considerable discontent among the bigoted adherents of the ancient superstition.

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Indian Car.

The various forms of penance and self-infliction form another mode of propitiating the favour of the Deity, and of obtaining with the vulgar the character of sanctity. These, always more or less prevalent among superstitious nations, are carried by the Hindoos to an extent elsewhere unparalleled. The Indian Yogues, or Fakers, bury themselves in the depth of woods, allow their hair and their nails to grow, and their persons to be covered with filth, till they almost cease to present any vestige of humanity. Others remain for years fixed in one painful position, with the arm raised above the head, till the limbs become shrivelled or distorted. Instances have been given of persons who buried themselves under ground, leaving only a narrow tube by which they might breathe, and by which food might be introduced. A long course of such austerities is imagined to invest them not only with the highest character of sanctity, but even with power over the invisible world; and stories are related of mortals who have thus ejected potent deities from their place in the sky. A more obvious advantage is derived from the admiration of the multitude, who lavish not only homage but gifts on these uncouth devotees: and, as a certain period is supposed to complete the merit of the penance, they obtain time to enjoy its fruits, and often abandon themselves to every species of licentious indulgence.

The ideas of a future state present also a strong and peculiar character under the Hindoo mythology. The human mind being considered an emanation from the Bramh, or supreme mind, they have adopted, to account for its pre-existence, the doctrine of the metempsychosis, or transmigration of souls, which is diffused over the whole East. Under this system, the souls of all animals are supposed to be those of men thus degraded, in punishment of their sins, but capable, after many ages, of regaining their pristine condition. In a cow, or a dog, they recognise, perhaps, a deceased friend or ancestor; and are thus led to treat them with a tenderness characteristic of the nation. This weakness they often carry to a ridiculous height, keeping hospitals for aged and even noxious creatures. Their creeds afford also, for the reward of the good, a variety of heavens, glittering with gold and precious stones, watered by crystal streams, and affording in abundance pleasures not always of the purest nature. The places of future punishment are in like manner multiplied, and filled with various species of torture; such as being burnt with hot irons, dragged through thorns, bitten by snakes, or thrown into vessels of liquid fire. The deeds, according to which these rewards or punishments are awarded, compose the moral code of the Hindoo. As it includes all the elementary principles of human duty, it has, no doubt, to a great extent, a salutary influence. Too great a proportion, however, of the actions to which merit is attached, consists merely of outward idle ceremonies and absurd penances; and, in particular, the bestowing of gifts upon Brahmins, is a duty diligently inculcated by these reverend instructors.

Religion has evidently been the main agent in causing that distribution into castes which forms the most prominent feature in Hindoo society. In all half-civilized communities, aristocratic distinctions are carried to an extreme height; but nowhere is the distinction

between man and man rendered so broad and so monstrous as by this institution. In Egypt, and other ancient countries, a similar distinction appears to have existed, but was never so strong nor so permanent. A greater variety are enumerated by the Greek writers, as existing in their time among the Hindoos; but at present there appear to be only four prominent castes: the Brahmins, or priests; Cshatryas, or military class; the Vaisyas, or merchants; and the Sudras, or labourers. The functions and station of all these are fixed by their birth in the most decided manner.

The Brahmins hold, beyond all comparison, the first place in point of dignity, and are regarded by the other classes with profound and spontaneous veneration. Yet no established provision is made by the public for supplying them with even the means of subsistence. Their ordinary dependence is upon alms; and to this mode of support they have given such a lustre, that over all India he who receives alms is considered as ranking higher than he who bestows them. This situation, at once powerful and dependent, is not favourable to the character of the Brahmins, who are led to employ their influence over a superstitious people entirely to the furtherance of their private views. The bestowal of copious gifts upon a Brahmin, and his consequent benediction, are represented as effacing every sin, and securing the most ample blessings. His curse is the forerunner of the most dreadful evils: it has even been represented as sufficient to strike its victim dead on the spot. At marriages, funerals, and on other great festal occasions, the rich Hindoos strive to distinguish themselves by large donations to Brahmins, of cloth, cows, rice, gold, and whatever is esteemed most valuable. Their influence is augmented by the use of *mantras*, or mighty words, deemed to have power even over invisible creatures, as well as by the discernment of the lucky and unlucky times and modes for doing all things. A prince or great man thus reckons it indispensable to keep near him some eminent Brahmins to be his guides in all the actions and emergencies of life.

The Cshatryas, though inferior to the Brahmins, rank high in public estimation. The name signifies "sons of kings," and implies a boast of their descent from the ancient Rajahs. In their persons, they are handsome, tall, and athletic; but they are generally destitute of principle; and many of them practise the trade of robbery on a great scale.

The Vaisyas, or mercantile class, are numerous in the cities, particularly of the coast, where they bear the title of Banians. Though their character is often disgraced by deceit and low cunning, some of them maintain a high character for mercantile talent and probity, and accumulate immense fortunes. In the interior their situation is more equivocal; they are found acting in various capacities, and many even serve as mercenaries in the Mahratta armies, or in the British service.

The Sudras include the ryots, or cultivators of the ground, and also most of those engaged in handicraft trades. Though generally ranked below the Vaisyas, they do not altogether admit their inferiority: many of them acquire considerable wealth, and maintain a respectable place in society. There are, moreover, a number of small detached classes formed by the mixture of the four primary ones, and called the *Burrensunker*, by whom most of the handicraft trades are exercised.*

A class of outcast beings yet remains, whom Hindoo society excludes, and to whom it denies the common rights of humanity. These consist of those persons who, from a neglect or violation of any of those minute observances which are necessary to preserve caste, have been expelled from any of the four classes above mentioned. From that moment the individual is deserted by his nearest relations, is excluded from all the charities and social connections of life; he forfeits even his property, and is commonly forced to flee into distant exile. The Pariahs in the south form a class of hereditary outcasts. No human beings exist in a more lost and deplorable state. It is contamination to enter their house, or eat any victuals prepared by Pariahs; nay, some consider themselves polluted by their very touch.

*[These representations as to the unalterable occupations and stations of the different castes in India have been shown by Mr. Colebrooke (*Asiatic Researches*, vol. v.) to be extremely exaggerated. He states, that the number of the mixed classes is almost innumerable, and that, while to the four great primary castes various professions and employments are permitted, to the mixed races hardly any is forbidden. "A Brahmin," says he, "unable to subsist by his duties, may live by the duty of a soldier; if he cannot get a subsistence by either of these employments, he may apply to tillage and attendance on cattle, or gain a competence by traffic, avoiding certain commodities. A Cshatrya in distress, may subsist by all these means; but he must not have recourse to the highest functions. In seasons of distress, a further latitude is given. The practice of medicine, and other learned professions, painting, and other arts, work for wages, menial service, alms, and usury, are among the modes of subsistence allowed both to the Brahmin and Cshatrya. A Vaisya, unable to subsist by his own duties, may descend to the servile acts of a Sudra; and a Sudra, not finding employment by waiting on men of the higher classes, may subsist by handicrafts, principally following those mechanical operations, as joinery and masonry, and practical arts, as painting and writing, by which he may serve men of superior classes; and although a man of a lower class is in general restricted from the acts of a higher class, the Sudra is expressly permitted to become a trader or an husbandman. Besides the particular occupation assigned to each of the mixed classes, they have the alternative of following that profession, which regularly belongs to the class from which they derive their origin on the mother's side; those at least have such an option who are born in the direct order of the classes. The mixed classes are also permitted to subsist by any of the duties of a Sudra, that is, by menial service, by handicrafts, by commerce, and agriculture. Hence it appears, that almost every occupation, though regularly it be the profession of a particular class, is open to most other classes; and that the limitations, far from being rigorous, do in fact reserve only the peculiar profession of the Brahmin, which consists in teaching the Veda, and officiating at religious ceremonies."—Am. Ed.]

They are confined in the towns to separate quarters, and employed in the rudest and most disgusting labour. In this degraded condition, it is but too natural that they should lose all sense of character, and, by filth, intoxication, and other excesses, justify, in some degree, the contempt in which they are held.

This strictness and uniformity of the Indian system does not wholly prevent the rise of sectarian distinctions. The Vishnuvites and Sivites, without an absolute separation, have each adopted a train of opposite worship and observances. Contrary to the toleration generally prevalent in India, they engage in violent quarrels, which often come to blows, on the merits of their respective systems. The Vishnuvites lead a wandering, irregular life, like gypsies. The Jains are entire separatists. Instead of one supreme being, they worship mortals exalted into deities; but their habits of life are strict and austere. The Boodhists, or followers of Boodh, profess a creed somewhat similar, but with a much more entire separation. Originating in or near India, they have been almost expelled from that country, but have obtained the supreme religious sway in Thibet, Tartary, and the whole east of Asia. We shall therefore have opportunities to treat of them more particularly.

The literature of Hindostan rests, like its social state, almost entirely upon its religion. To all the books which it owns as valuable or classical, a divine origin is ascribed. The four Vedas, the grand basis of Hindoo learning, are believed to have issued simultaneously from the mouth of Brahma, though they are strangely enough supposed to have required the labours of Vyasa, a learned Brahmin, to bring them into a state fit for perusal. They consist in a great measure of invocations or addresses to the multifarious deities worshipped throughout India, many of which, when duly repeated, are supposed to have the power of charms, calling down good on the worshipper and his friends, and the most dreadful evils upon his enemies. They contain also precepts for the conduct of life, various in character and merit; with a full exposition of the national creed respecting the origin of the gods, the creation of the world, a future state, and the transmigration of souls. They are illustrated by the Sastras and other most extensive glosses and comments; all of which, like the original, are supposed to be the result of inspiration. This primary fountain of Indian knowledge is carefully shut, unless to Brahmins; none of any other class must throw his eyes on these sacred pages, or even understand the language in which they are written. Second to them are the Puranas, which, like the Vedas, are composed almost entirely in verse; and the ten Puranas contain nearly half a million of stanzas. They form a strange and heterogeneous medley of sound precept, useful doctrine, wild fable, and directions for puerile observances. The narrative part relates rather to the gods than to men; but these superior natures are exhibited as conforming very ill to the duties which are inculcated upon mortals; bloody wars and licentious amours forming the exploits most frequently recorded. Below the Puranas in celebrity and sanctity are the Mahabarat and Ramayana, two great epics, or rather wild metrical romances, similar in strain to the Puranas; for, though the basis be narrative, they abound in precept; and though they profess to detail the adventures of human heroes, the actors and the events are almost wholly supernatural.

In this enumeration, which includes all the serious literature of Hindostan, one capital defect must be obvious: history finds in it no place. Their wild legends are plausibly supposed to have a foundation in the story of some celebrated early kings or conquerors; but it is impossible, through the mist of fable, even to conjecture any thing precise respecting their real existence. The Iliad and Odyssey are, in comparison, plain and authentic chronicles. Every thing in the shape of history that India possesses is due to her Mahometan conquerors. The geography of the Hindoos, in like manner, is a mere poetical, or rather puerile, delineation, in which they arrange the features of the globe in fancied symmetry, describe it as containing mountains of gold, silver, and gems, seas of milk, clarified butter, curds, and spirits. Their chronology, like that of the Greeks, is divided into four ages, of which three are fabulous; and the first consists of nearly 2,000,000 years!

In the mathematical sciences, the Hindoos possess a considerable share of genuine merit. Algebra, in particular, had advanced farther with them than, till very lately, among the nations of Europe; since they had made a considerable progress in the indeterminate analysis. Their astronomy has been famed, but with less reason; for its tables, which have been supposed to indicate observations commencing at 3100 A. C., are now proved to have been calculated at a period much more recent. Even the skill by which they were produced is now extinct; and the most learned Brahmin of the present day can with difficulty attain a knowledge of the period of eclipses, to be employed by him for the purposes of divination.

In the lighter and more elegant branches of literature, India displays greater excellence. The fables of Pilpai, interspersed with moral maxims, possess the highest merit of which that species of composition can boast, and have been translated into all languages. The dramatic literature of the nation is very extensive, being little less voluminous than ours; and, though defective in plot, and destitute of the varied merits which characterise the works of a Shakspeare, a Racine, and a Molière, presents many passages distinguished for sweetness, pathos, and humour. Love, too, forms a copious theme; and the amatory poets of

India are eminent, though none of them has attained the fame of Hafiz. These compositions, however, want the genuine language of passion: they are distinguished by splendid imagery, but empty profession; there is something about them stately, sophisticated, and gravely extravagant. It may be observed, with regard to these and to all the other branches of Indian literature, that their productions are ancient; the language in which they are written is dead; and we know few Hindoo authors of the present day who are at all distinguished. The Brahmins, who alone ought to be learned, are now almost wholly illiterate. The only tincture of literature and thought appears to exist among some of the higher inhabitants of the great cities, who have derived it chiefly from intercourse with Europeans, and particularly with the missionaries. Among these, Rammohun Roy is the most distinguished.

Considering the Hindoos as a refined and wealthy people, it seems surprising that their architectural monuments should at present be of so humble a character. Even their temples, on which a superstitious people might have been expected to spare neither cost nor art, are immensely numerous, indeed, but both small in size and rude in structure. This character does not apply to the ancient religious edifices. The pagoda of Tanjore, and the mighty excavations of Ellora and Elephanta, present features which may rival the most splendid of those found in other Oriental empires. Temples erected even in the small Rajpoot principalities display a beauty rivalling those of ancient Egypt and even of Greece. Colonel Tod conceives, indeed, that Hindoo art has undergone a progressive degeneracy; and the more ancient the specimens are, they are always the more valuable. Since the sway of Mahometan nations was established in India, all the finest structures have been reared by them, and in their own peculiar style. The mosques and tombs constructed by Akbar, Shah Jehan, and Aurengzebe, rank with the most splendid specimens of Saracenic art. The palaces are also magnificent, yet built in a light and airy style, rather resembling pavilions. They are contrived for the admission of air from every point of the compass: they have spacious halls, long galleries, projecting roofs, and terraces open to the sky, with accommodation for sleeping there when the weather permits. They enclose shaded courts, gardens full of trees, marble baths, jets d'eau, arbours; every thing which can prevent the heat from being painfully felt. The great display of wealth is in the furniture, particularly in the fabrics of silk and cotton ornamented with gold, which are either spread on the floor and seats, or hung round the walls. The throne of the Mogul was estimated at 4,000,000*l* sterling, made up by diamonds and other jewels, received in gifts during a long succession of ages. Meantime, the habitations of the ordinary class are of the humblest description, rudely composed of canes and earth, and roofed with thatch. Irregular collections of these hovels, like clusters of villages crowded together, form the main composition of the greatest Mogul capitals, the splendour of which consists wholly in a few great streets or squares, formed by the houses of the grandees.

The vestments of the Hindoos are suited to the climate, and composed of the manufactures of the country; they consist of long flowing robes of cotton, both loose and light (*fig.* 618.). In some of the higher regions only, coarse woollens of home manufacture are preferred. The clothes worn by the higher ranks do not differ much, unless in their superior fineness; but the rank of the wearer is indicated by a profusion of jewels, embroidery, and gilding, the display of which caused the Mogul court in its glory to be regarded as without a parallel in the world. The fallen princes and soubahs, who have risen upon its ruins, console themselves by maintaining as much of this parade as their reduced revenues will support.

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Woman of Distinction.

In regard to diet, the Hindoos practise abstemiousness more than any other nation; and this from feelings not merely of duty, but of pride. The man who consumes, or even tastes, animal food or spirituous liquors, is considered by all the higher castes as an impure and degraded being, who must be thrust out from among them, and doomed to mingle with the vilest of his race. Rice and water suffice for the food of the purest classes, and scarcely any who have the slightest pretension to caste will admit within their lips a morsel of beef. The scruple diminishes as we descend; but it is only among the outcast classes that intemperance is found to prevail. The Mahometans, though by no means so scrupulous, are yet temperate. Their chief luxury is fruit, the best of which, being brought from the mountainous regions round India, is seen only at the tables of the great.

Sect. VII.—*Local Geography.*

In surveying that vast field which the local geography of India opens, we shall reduce it into five subdivisions: the Bengal provinces, including the former seats of Mogul empire; the western provinces; central India; the south of India; and, lastly, the countries on the Himalayah. The island of Ceylon will close the section.

SUBJECT. 1.—*Bengal Provinces.*

In pursuing the local survey of Hindostan, it will be expedient to begin with Bengal, the most fertile province, and, since it became the seat of the power which rules over Hindostan, the centre of political influence. The Bengal presidency, the greatest of the three into which British India is divided, comprises much more than the mere province of that name. It is a great empire, extending over all the fine regions watered by the Ganges and the Jumna, and comprising the provinces, or rather kingdoms, of Bengal, Bahar, Benares, Oude, Allahabad, Agra, Delhi, and Orissa. These territories, according to estimates made with some care, are supposed to contain about 220,000 square miles, and 70,000,000 inhabitants. Within this presidency are forty inferior courts, stationed at the principal towns, six courts of appeal, and one supreme court at Calcutta.

Bengal Proper consists of a vast alluvial plain, intersected by the lower courses of the Ganges and Brahmapoutra, with their numerous branches. These, during the rainy season, which lasts from June to September, inundate the whole country, and convert it into a sea, extending for hundreds of miles in every direction. The whole region is then navigable, and boats are seen sailing through the corn-fields, in which the ears of rice appear above the water. The soil consists entirely of sand and clay, not a rock or even a stone, being found for 400 miles up the Ganges. Fields thus profusely irrigated produce immense crops of rice, of which Bengal is the chief granary. The sugar-cane also flourishes; but the other Indian products are not so copious as in the upper provinces. The mango, that most delicious of Oriental fruits, grows here in perfection; but other fruits and culinary vegetables are watery and insipid. A great trade is carried on, up and down the Ganges, in boats of various form and dimension, the navigation of which is supposed to employ nearly 300,000 men. The main staple of their trade is the conveyance of rice from the country districts to the great cities, and salt from the coast to the interior.

Nearly the whole sea-coast of Bengal consists of the Sunderbunds, extending for about 180 miles. The Ganges, in entering the sea by eight large mouths, divides itself into a labyrinth of streams and creeks, through which boats make a difficult and perilous passage amid conflicting tides and eddies. The lands intersected by these numerous channels, being inundated by the water, which is everywhere salt, have never been brought under any regular culture. They form a vast desert, overgrown with thick forests, whence Calcutta is supplied with wood for firing, and for the building of boats. These extensive marshes afford also the opportunity of producing, by mere solar evaporation, large quantities of excellent salt, for which there is a constant demand in the upper districts of India. The Ganges appears, in the course of ages, to have experienced successive alterations in the main channels by which it is entered. The only one at present navigable for large vessels is the most westerly, called the Hoogly, but which by no means transmits the main body of its waters.

On the Hoogly branch is situated Calcutta (*fig.* 619.), which, from a few straggling cottages in a wooded marsh, has been raised by Britain to be the capital of India. In 1696, the English were allowed by Aurengzebe to establish a factory, and in the following year to secure it by a fort. In 1757, it had not above seventy English houses, when it was taken and destroyed by Surajah Dowlah. Lord Clive, having become master of Bengal, made Calcutta the capital, and founded a fort, which has cost about 2,000,000*l.*, and is very strong, though requiring at least 10,000 troops for its defence. Calcutta has from that time been perpetually increasing, and is supposed to contain 500,000 inhabitants; while, within a radius of twenty miles, there are upwards of 2,000,000. The situation was originally very unhealthy, being in the midst of forests and swamps; and, though these have been in a great measure cleared away, it still suffers by the damp breezes from the Sunderbunds. The English town, or suburb, called Chouringee, consists of 4300 houses. Though built only of brick, it is elegant, and even superb: the houses are handsome, covered with fine plaster, called chunam, each being detached, and surrounded by a wall. Strangers ascending the river are particularly struck by the number of elegant villas, with which all the environs are studded. The Black Town, comprising much the greater part of Calcutta, consists, as in other parts of India, of miserable cottages of mud and bamboo. The government house is a very splendid and costly structure; and considerable state is maintained, though not to that degree which can rival the parade of Asiatic courts. A college was founded by the Marquess Wellesley, which boasted many

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Calcutta.

illustrious members, but has of late been much reduced. The allowances to all the servants of government are liberal; and though their aim, in going out, has generally been to return with an independent fortune, they indulge in a hospitable, splendid, and expensive style of living. Large dinner parties, in preference to public amusements, form the favourite recreation.

Bengal, on the west, touches almost immediately on the frontier of the province of Orissa; but, before ascending into the interior, we must take a view of Chittagong, the most easterly district, situated beyond the estuary of the Brahmapoutra, and touching almost immediately on the Birman frontier. A large part of it consists of mountain and woodland tracts, through which roam large herds of wild elephants; but other tracts are very well adapted for cultivation; and the result of enquiries made by the Marquess Wellesley gave reason for computing its inhabitants at 1,200,000. The agricultural population are called Choomeas: they live, in a peaceable manner, under a rajah who pays a tribute to government; but the interior is occupied by the Kookies or Lunctas, who live almost the life of savages; have their villages on the top of high hills, surprise their enemies in the night, massacre the males, and carry off the women and children as slaves. Islamabad, the capital, is an ancient city, on a navigable river, with a tolerable harbour; and attempts have been made to render it the emporium of Bengal; but the difficulty of communication with it has always secured the preference to the western ports.

Returning to Calcutta, and ascending the Hoogly branch, we come first to Serampore, a neat thriving little town, at which is a Danish settlement. This place is interesting as the seat of the Baptist missionaries, who have distinguished themselves by such learned and extensive labours in the pious task of translating the Scriptures into all the languages of India, and even of China. About twenty miles above Calcutta is Chandernagore, noted as the capital of the settlements belonging to the French in Bengal. It surrendered, however, to Lord Clive; and, though restored, has never regained any importance. Six miles higher is Hoogly, for several centuries the port of Bengal, and the seat first of the Portuguese, and afterwards of the British and Dutch factories. It ranked at one time among the greatest Indian emporia; but, on the rise of Calcutta, gradually lost its splendour, though it is still populous and considerable.

About 120 miles above Calcutta, and on the same branch, occurs Moorshedabad, made, in 1704, the capital of Bengal, and still the residence of the Nabob, who, being allowed a handsome pension by the British government, lives in considerable state. This city, and the contiguous one of Cossimbuzar, also large and populous, situated on an island in the Ganges, form the main seat of the silk manufacture, which is nowhere else in India carried to equal perfection. The fabrics are chiefly taffetas, satins, carpets, and knitted stockings.

To the west of the line up the river, are the districts of Burdwan and Birbhoom, the former of which is reckoned nearly the most fertile in India. Though only seventy-three miles long and forty-five broad, it maintains a population of 2,000,000; and the rajah, as zemindar, pays a revenue of 400,000*l*. It is entirely agricultural, and contains no town of importance.

To the east of this line, also between the Ganges and the Megna or Lower Brahmapoutra, is Dacca, a very fine and interesting district. Wholly intersected by these rivers and their branches, it is liable to extensive inundations, which often alter the boundaries of fields, and convert many into jungle, while to others they communicate extreme fertility. Dacca is the chief seat of the muslin manufacture, and its fabrics of this description are the finest and most beautiful in the whole world. Of late, however, the demand has so much diminished, that the hereditary skill by which this beautiful art is preserved is in danger of being lost. Cotton quilts, dimities, and cloths are also manufactured. Dacca was the capital of Bengal in the reign of Jehangire, and is still a very large city. It contains 150,000 inhabitants, displays no particular splendour, but is the seat of a great trade.

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Minaret at Gour.

We return to the Ganges; and, joining its main stream, soon discover the remains of Rajhmahal, the residence of the soubahs of Bengal under Aurengzebe, and celebrated even in the East for its magnificence. Marble halls and deserted courts mark the departed grandeur of the palace of Sultan Shujah. A little to the north, on a river which falls into the Ganges, is Maulda, a thriving place, with considerable manufactures of silk, and of mixed silk and cotton. A few miles from Maulda, along a branch of the Ganges now dried up, extend for many miles the remains of Gour, which, in the thirteenth century, the Mahometan conquerors established as a proud capital of India. The materials appear to have been carried away to form modern cities: a great part of the pre-

sent site consists of jungle, the abode of tigers; but wherever cultivation takes place, the brickdust in the soil indicates ancient habitation. A diligent search has recently discovered the remains of a considerable number of mosques and palaces. One minaret (*fig.* 620.), represented by Mr. Daniel, displays the traces of peculiar magnificence.

Upper Bengal presents a considerably different aspect from the lower province. The climate is cooler;, and wheat and barley are raised, in preference to rice. The northern tracts are hilly and irregular, inhabited by a race of short, stout, rough mountaineers, who sometimes annoy the inhabitants of the plains, but who display an honesty and veracity very superior to that of Hindoos in general. The Ganges, which had hitherto spread its waters so wide over the plain, is now confined between granite rocks, which at Siclygully approximate so closely, that attempts were made to defend the passage by a fortification, now abandoned to decay. On emerging from this narrow pass, we enter another district.

Bahar, though properly a distinct province, is often almost identified with Bengal. The territory is fertile and beautiful; not so copiously inundated, but still well watered by the Ganges and numerous tributaries, particularly the Soane, from the Vindhya chain, and the Gunduck from the Snowy Mountains. In preference to rice, it yields very fine wheat; but opium and saltpetre, both excellent and in large quantity, form its characteristic products. It abounds also in all the manufactures of India, though none of them attain the same unrivalled excellence as at Dacca and Moorshedabad.

The Ganges is still the line upon which the great cities are situated. Monghir, capital of a fine district of the same name, is a considerable and ancient town, commanding a peculiarly admirable view along the banks of the Ganges. It was the frequent residence of Sultan Shujah, and Cossim Ali Khan, who bestowed great pains in erecting a very strong fort for its defence. To this erection the British government have ceased to attach much importance, since their dominions were extended so far to the westward as to render Monghir no longer a frontier station. Somewhat lower down is Boglipoor, a neat manufacturing town, which sometimes gives name to the district.

The city of Bahar stands at some distance from the river; and though the ancient capital, and even a royal residence, has now fallen much into decay. The chief city of the province, and one of the greatest in India, is Patna, extending about four miles along the river. It has been supposed to be the ancient Pallibothra; at all events, it is of considerable antiquity, and was the residence of the soubahs of Bahar before its government was merged into that of Bengal. There are a number of mosques and temples; but the only part of the city which can be considered handsome is the suburb of Bankipoor, occupied by the British residents. The prosperity of Patna is founded on the fertility and high cultivation of the district in which it is situated, and on its importance as the emporium for the staple products of opium and saltpetre. Dinapoor, in the vicinity of Patna, forms a fine military station. Gayah, about fifty miles south of that city, and on a tributary of the Ganges, is one of the holy cities of the Hindoos, and the scene of a most crowded pilgrimage. About forty miles above Patna, the Ganges receives the Gogra, the second of its tributaries in magnitude; and, soon after passing Buxar, a strong fortress, now dismantled, we quit Bahar.

Allahabad, the next province, is very extensive, reaching farther north and south of the river than along its banks: the latter portion, however, is by much the finest. The first district which occurs is that of Benares, considered sometimes as a separate province, and even occasionally annexed to Oude. It is supposed, with the single exception of Burdwan, to be the richest and most cultivated district of all India, and, within a narrow compass, contains a population of 3,000,000. Its chief ornament, however, is the city of Benares (*fig.* 621.), which is universally accounted by the Hindoos to be ancient and holy beyond all others. It may be said to form the grand depository of the religion and learning of this vast country. Its sacred character, which is supposed to ensure the salvation of all who die within its precincts, cannot fail, in a nation devoted to pilgrimage, of rendering Benares a scene of extensive and crowded resort. Its own population, long supposed to exceed 500,000, has been found by a late census not to be more than 200,000; but it is augmented, at solemn seasons, by pilgrims to a much greater number. Benares, in fact, presents a more lofty and imposing aspect than any other Indian city. Its houses, instead of being a mere collection of mud and straw huts, are most of them built of brick, and some of them five or six stories high; so that

Benares.

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Chunarghur.

they make a very magnificent appearance, especially from the opposite side of the river. Partly, however, with a view to coolness, the streets are very narrow, with small windows, and terraced roofs. Benares contains also temples and mosques in vast numbers; though, as in the case of other modern Hindoo structures, not on a scale commensurate with the grandeur of the country and city. The greatest of them was levelled to the ground by Aurengzebe, who in its stead erected a mosque, which now forms the principal ornament of Benares. Chunarghur, (*fig.* 622.), near Benares, is one of the strongest of the Indian hill-forts, and has been converted by the British into a great military station. It was anciently a town of great importance, and contains a mosque, the entrance to which has been delineated by Mr. Daniel, as one of the finest examples of this species of architecture (*fig.* 623.)

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Entrance to a Mosque at Chunarghur.

The next division of the province, in ascending the river, is that of Allahabad Proper. It is highly productive, more in wheat than in rice; for, though traversed by the parallel streams of the Jumna and Ganges, it is little inundated, and the water, so essential to the growth of rice, requires to be conveyed by laborious processes over the fields. The city of Allahabad is extensive, but not distinguished by any peculiar magnificence or ornament. Its chief feature consists in the fortified palace (*fig.* 624.) begun by the emperor Akbar, on which upwards of 12,000,000 rupees are supposed to have been expended. It is of surprising extent, having one side on the Jumna, and the other near the Ganges, which rivers here unite. It was considered by the Hindoos as impregnable; but, not being found proof against cannon, the English have fortified it in the European manner, and have made it a grand military depôt for the upper provinces. The Hindoos regard with religious veneration all junctions of rivers, particularly with the sacred stream of the Ganges. This junction, therefore, of the Ganges with its greatest tributary becomes, without dispute, the holiest spot in all Hindostan. Accordingly, it attracts hosts of pilgrims, of whom many endeavour to secure a happy futurity by seeking death in its hallowed stream. The most approved mode has been, for the devotee to cut off his own head, and allow it to drop in, as an offering to the Gangetic deity. Not far from Allahabad is Mirzapoor, one of the greatest inland trading towns of India, a great mart for cotton and spun silk, and the seat of very considerable manufactures.

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Fortified Palace at Allahabad.

The other districts of Allahabad extend chiefly south-west from the Jumna towards the Vindhya mountains and the head of the Nerbuddah. This territory is of great extent, but, being hilly and often arid, is by no means so productive as the tract watered by the two rivers. It is a very strong country, the hills generally presenting that form of precipitous sides, with a table-land at top, which renders them, as natural fortifications, stronger than any which can be made by art. To the greater part of this district is given the name of Bundelcund, the chief city of which is Callinger, the strongest fortress of the character we have just described, and the rival of Gwalior. It was long held by an independent rajah, even against the Mogul; but in 1810, by prodigious efforts of valour, and after one severe repulse, the British became masters of it. Cawnpoor, on the Ganges, has become highly important as a military station Bundelcund is distinguished by the diamond mines of Pan-

nah, which, though not in any respect equal to those of Golconda, are of great value. In the time of Akbar, their annual produce was estimated at eight lacs of rupees; but it is now much diminished.

The province or kingdom of Oude extends north from Allahabad, near whose eastern frontier the Ganges, as already mentioned, receives the Gogra or Sarjou, which is its greatest tributary next to the Jumna; and forms a broad and copious stream descending from the Himalayah. Its course had previously watered the plain of Oude, a rich territory, the lower districts of which are not inferior to those of Bahar and Benares, on which they border; and the upper, though not equal, by no means barren. By the treaty of 1801, a large and valuable portion was ceded to the British; the nabob retains the rest, and continues to reside, in diminished splendour, at Lucknow. This city, while the nabobs of Oude were in full power, ranked with the most splendid in India. Sujah ul Dowla, who had a peculiar architectural taste, embellished it with a number of mosques and palaces, with varied ornaments and gilded domes, which have a very brilliant effect. The population has been reckoned at 300,000, but it is probably diminished. Oude, the earlier capital, is in ruins; but Fyzabad, which succeeds it as such, is still a populous city.

Proceeding up the parallel streams of the Ganges and Jumna, we find the space between them, and for some distance westward, occupied by the province of Agra. This extensive territory presents sensible indications of its approach to the great mountain territory of India. The climate, unless when hot winds blow, is cool, and even actually cold; and the rivers, less ample, and confined within higher banks, administer sparingly the boon of moisture. It derives its chief lustre from containing Agra, one of the great Mogul capitals. This it owed to Akbar, who, from a village, converted it into one of the greatest cities of Asia. It completely shared, however, the fall of the dynasty, and the greater part of it is now in ruins. Yet the eye may still range over a vast extent of country, covered with the remains of ancient magnificence. The houses, like those of Benares, are high, and the streets narrow. The vicinity is adorned by the palace of Akbar, and still more by the Taje Mahal (*fig.* 625.), erected by Shah Jehan, in memory of his sultana; which is reckoned the finest tomb in the world. It is composed entirely of white marble, inlaid with precious stones, and is said to have cost 750,000*l*. Agra, since its capture by General Lake in 1803, has remained in the possession of the British, and is become the seat of one of their grand courts of justice and revenue.

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Gate to the Taje Mahal.

Secundra and Muttra are two ancient and remarkable cities, situated on the Jumna, a little above Agra. The former, now in ruins, is only distinguished as containing the splendid and ornamented tomb of Akbar (*fig.* 626.). composed entirely of white marble. Muttra is one of the most ancient and venerated Hindoo cities, considered by Heber as almost resembling Benares. It is still a considerable place, and important as a military station.

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Gate to Mausoleum of the Emperor Akbar.

The finest and most fertile part of the province of Agra is the Doab, or the country between the rivers; and it is in the immediate occupation of the British government. Within this district are the remains of Kanouge, now a poor village, situated to the west of the Ganges, but whose brick walls, extending for six miles, attest the ancient grandeur of a capital which, eight centuries ago, ranked superior to any other in northern Hindostan. A Hindoo temple, and the mausoleum of two Mahometan saints, still display magnificence; and a number of ancient coins have been dug up on the spot. Furruckabad, capital of a small district of the same name, is a thriving commercial city.

Agra, west of the Jumna, is divided into two parts by the tributary stream of the Chumbul, flowing eastward from the vicinity of Oojein. The northern part is held by a number of rajahs, whom fear or policy maintains in a dependent alliance with Britain. They belong chiefly to the warlike tribe of the Jauts, who, in the seventeenth century, migrated from the banks of the lower Indus, and, availing themselves of the distracted state of the empire, seized a number of the strongest places in the district. The capital of their most powerful chief is Bhurtpoor, perhaps the most formidable of all the mountain fortresses of India. Its

siege in 1805 cost the British army a greater loss than it had sustained in any three pitched battles; and the rajah, at the close of it, was able to secure very favourable terms. In 1825, however, it yielded to the British arms. The province to the south of the Chumbul was allowed by the treaty of 1805 to be annexed to the territories of Scindia. It contains also a number of hill-forts, among which is pre-eminent Gwalior (*fig.* 627.) which, for natural strength, has scarcely, perhaps, its equal in the world. It consists of a table plain a mile and a half long, and less than a quarter broad; and, being surrounded on all sides by a precipitous face of rock, was supposed impregnable, till, in 1780, it was carried by escalade by Major Popham; and again, in 1804, so formidable a breach was effected by Colonel White, as to cause its surrender. Lord Cornwallis afterwards ceded it to Scindia, the Mahratta chief, who has made it his capital; an act of his lordship which has been considered more generous than politic. Gohud is also an important place, though not of the same military strength. Its rajah acted for some time an important part in Indian politics; but he is now almost entirely dependent upon Scindia.

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Gwalior.

Continuing to ascend in a north-westerly direction up the great rivers, and approaching to their mountain sources, we find Delhi, raised latterly to high distinction as the chief seat of Mogul empire. This province is ruder, and less susceptible of culture, than any of those hitherto named. Few parts of it enjoy the benefit of inundation, except the banks of the Cunggar; while artificial irrigation and agricultural improvement have been almost annihilated by the desolating ravages, first of Nadir Shah, and subsequently of the Afghans and Mahrattas. The central district of the province between the two rivers is held by the British in immediate sovereignty; and, notwithstanding some defects of administration, it is sensibly recovering, and its population is increasing. On the banks of the Jumna, near the northern frontier, is found, mouldering in decay, the city of Delhi. It was, in early times, a great Hindoo metropolis, under the name of Indraput; but Shah Jehan, in the middle of the seventeenth century, made it the chief seat of Mogul dominion, and such it afterwards continued. Here, in 1806, died Shah Allum, the last of that mighty dynasty who could be said to enjoy any portion of real empire. His son Akbar is still allowed by the British to bear that great name, and to receive a considerable proportion of the revenues of the province, which enables him to live in some splendour. What remains of Delhi is still rather a handsome city; the streets, though narrow, contain many good houses, built of brick, and partly of stone. It contains some manufactures of cotton cloth, and is the rendezvous of caravans which maintain the communication of India with Cabul and Cashmere. The palace of Shah Jehan, with its gardens, a mile in circumference, bears still a most magnificent aspect, particularly its gateway; but a long range of those belonging to the great chiefs and omrahs of the empire, adorned with gilded mosques, pavilions, and tombs, now present only one vast scene of ruin and desolation.

Delhi contains the most splendid modern edifices by which any part of the empire is adorned. The mosque called the Jumna Musjeed (*fig.* 628), erected by a daughter of Aurengzebe, of red stone inlaid with marble, is considered decidedly the finest structure in India dedicated to Moslem worship. The Cuttub Minar (*fig.* 629.), reared by one of the Patan emperors named Altumsh, is 242 feet high, and considered by Bishop Heber the finest tower he ever saw. It rises in five stages, the three lowest of which are of fine red granite, the fourth of white marble. The summit commands a most extensive prospect.

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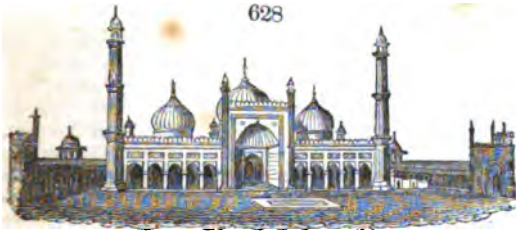

Jumna Musjeed, at Delhi.

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Cuttub Minar.

In the northern part of the province of Delhi, to the east, are the large and industrious towns of Bareily, Meerut, Shahjehanpoor, and Rampoor. The two former possess importance as military stations, and the barracks at Meerut are very extensive. A large Christian church has recently been erected there.

The north-western part is composed of the district of Sirhind, which is now chiefly possessed by the Seiks. Though traversed by the sacred stream of the Sereswattee, it is for the most part arid and barren. It has been further desolated by the hostile operations of the Seiks, and has also suffered from the ravages of the Persian and Tartar conquerors, having been the regular track by which they penetrated into Hindostan. The city of Sirhind, celebrated, under Sultan Feroze, in the fourteenth century, as a gay and flourishing capital, is now in a state of total ruin. The most flourishing place in the district is now Patiala; but a greater historical celebrity belongs to Kurnal and Panniput, one the scene of the victory of Nadir, the other of that of Ahmed Shah, which broke the power of the Mahrattas.

SUBSECT. 2.—*Western Provinces.*

As it is intended to treat separately of the territory situated along and within the great range of the northern mountains, we shall proceed direct from Delhi to the provinces on the western frontier. This range by no means presents the luxuriant and fertile aspect of those watered by the Ganges and its tributaries. It consists of a vast plain of sand, whose uniformity is only broken in the north by the Punjab, or the region of the five rivers, which, descending across it from the Himalayah, enter the Indus by one united channel.

Lahore, the chief of the western provinces, includes the greater part of the Punjab, with a considerable extent of mountainous territory to the north. This last is by no means unproductive; the earth washed down by the rains being formed into terraces by parapets of stone. Thus, all the kinds of grain peculiar to the temperate climates are raised in abundance, and even large forests of firs grow on the higher acclivities. The finer and more beautiful part of Lahore, however, is that situated on the rivers, where the plains are covered with the richest tropical productions, and, in the days of their prosperity, were regarded as almost the garden of India. The ravages of the Persian and Afghan conquerors, and the rude sway of the Seiks, have reduced culture and industry to a low ebb; but it has of late begun to revive. Very fine salt and sla-gem are found on the banks of the Indus, which, at Attock, is crossed by a range principally composed of this mineral.

Lahore has now entirely fallen into the possession of the Seiks, who, from a religious sect, have become a great political body; and, as such, have been already described. Besides Lahore, they occupy, as has been seen, the north-west of Delhi, and the greater part of Moultan; and are the most important native state now existing. The Mahometans, formerly the ruling people, are kept by them in a completely subject and degraded state, and are allowed even a scanty measure of religious toleration. The disunion of the Seiks, and their rude habits, are unfavourable to industry and commerce, which would have required a protecting hand to enable them to emerge from the effects of long civil contest, and of the repeated passage of desolating armies from Persia and Afghanistan. Although, therefore, the Seik chiefs are beginning to see their error, and are endeavouring to afford encouragement to trade, the country has lost much of its ancient fertility and beauty, and does not contain a population adequate to its extent.

Lahore, the nominal capital of this province, was one of the most beautiful cities of India, when, under the early Mogul princes, it was made an intermediate residence between Cabul and the interior. Akbar, Jehangire, and Feroksheré successively contributed to its embellishment. The mausoleum of Jehangire, only surpassed by the Taje Mahal at Agra, is still nearly entire; and there are ample remains of the palace adorned in the highest style of Eastern magnificence. Its terraced roof, covered with a parterre of the richest flowers, suggests the idea of the hanging gardens of Babylon. All, however, went rapidly to ruin, under the multiplied desolations which Lahore has suffered; though its situation, on the fertile banks of a fine river, and on the high road from India to Persia, must always secure to it a certain degree of population and wealth. Recently, also, Runjeet Sing, the supreme Seik chief, has made it his capital, and it has a population of 80,000.

The importance of Lahore is, in a great measure, shared by Umritsir, the holy city of the Seiks, and the rendezvous of their gurumata, or great national council. The object of attraction here is a tank or pond, formed by Guru Govind, an early chief and saint, who gave it the name of the "pool of immortality," and taught, that those who bathed in its waters were purified from all sin. This belief has led to an immense concourse of the sect, whose contributions support a large temple, built in the midst of the water, with 600 acalies or priests attached to it. Umritsir is an open town; but it contains the strong fort of Govind Garrah, in which Runjeet Sing keeps his treasure and arsenal. It is eight miles in circumference, well built of brick, but without any structures of peculiar magnificence. It forms the centre of a considerable caravan trade with Cashmere; and, from the security found there amid recent revolutions, it has been chosen as a residence by the chief moneyed men in this part of India. It has 100,000 inhabitants.

To the south of Lahore is Moultan, an appellation which Mr. Elphinstone reduces within very narrow limits, by confining it to the district immediately dependent on the city of that name, and excluding those of Bawulpoor and Leia; but we shall adhere to the original Hindoo idea, which comprehends under Moultan all the lower course of the five rivers after their union into two great channels, and thence westward to the Indus. These rivers roll through a desert; but the partial inundation, and the conveyance of the water over the fields by Persian waterworks, diffuse fertility to a considerable distance on each side of their banks. Their immediate vicinity, indeed, is in some places covered with mud so soft, that it cannot bear the tread of a horse. Wheat and cotton are the most valuable products. Agriculture, however, with its essential process of irrigation, exhibits visible marks of decay, consequent upon the successive conquests and inroads to which the land has been exposed. The whole of this province, lately tributary to the king of Cabul, is now under the dominion of Runjeet Sing, chief of the Seiks. Moultan is a fine city, about four miles in circumference, and surrounded by a very handsome wall. It contains a temple of great antiquity, highly venerated, and the object of crowded pilgrimage from all parts of India. There are also several very beautiful tombs, covered with high cupolas of glazed and painted tiles. It is distinguished by manufactures of silks and carpets, the latter in imitation of those of Persia, but of inferior excellence.

Beyond the river Gharra, which forms the eastern boundary of Moultan Proper, stretches the district of Bawulpoor, governed by Bawul Khan. Near the river it is very fertile; but, in receding, it passes into almost complete desert, of which the greater part of this extensive tract consists. It extends also south, occupying a considerable reach of the banks of the Indus. Bawul Khan, the most powerful chief in this tract, raises a revenue of 1,500,000 rupees. He maintains a well-appointed army of 10,000 men, and has a cannon foundery, which supplies him with good and well-mounted guns. The city of Bawulpoor is as extensive as Moultan, but not so populous; a great part of its area being occupied in gardens. The houses are built chiefly of unburnt brick. It is remarkable for the manufacture of loongees, or silken girdles, and of turbans.

The western part of Moultan, between the Acesines and the Indus, composes the district of Leia. Every thing here begins to assume an Afghan aspect. The mighty snow-covered mountains of that country appear in the distance; the higher ranks of the people affect the Persian language and manners; and the farm-yards and agricultural economy display that superior neatness, and those almost European modes of management, which characterise the countries beyond the Indus. The territory at all remote from the river is little better than a desert. The chief raises a revenue of 500,000 rupees. His armed force consists of two regiments of musketry, and 5000 cavalry. Leia being a poor village, the residence of the rajah is at Bukhur, a flourishing little town near the Indus.

The population of the whole province of Moultan is properly neither Hindoo nor Afghan. It consists of Jauts, the race whom we have noticed in the western parts of Agra, and of colonists from Beloochistan: these people are all Mahometans. There is an intermixture of Hindoos, which is greater in the more easterly tracts, but nowhere composes the leading race. Camels are extensively employed for the purpose of travelling over the vast bordering deserts.

The lower Indus, after receiving by one channel the united waters of the five rivers of the Punjab, flows for a great space through a region which, beyond its immediate banks, is almost entirely desert. Its character, however, changes when separating into two branches, of which the westerly is the largest: it forms a delta similar, though on a smaller scale, to that of Egypt. This delta, with a considerable extent of territory on each side, forms the kingdom of Sinde, which was highly flourishing while it was maintained in a pacific posture under the sway of the Mogul. Its alluvial and inundated territory was kept in high cultivation, and yielded abundant crops of rice, sugar, indigo, and cotton. Tattah, the ancient Pattala, situated on the western branch, was then one of the greatest of Oriental emporia. Enjoying a free navigation for large vessels up the Indus as far as Lahore, it became the grand medium by which the products of Western India and Afghanistan were exchanged for those of Malabar and Coromandel, and for European goods. One of the chief materials of trade was afforded by its own manufactures of cotton cloth, which, even in the time of Nadir, are said to have employed 40,000 weavers. Amid the breaking up of the Mogul empire, however, an opportunity was given to the chiefs of a warlike and barbarous race, called Talporee, who occupied the neighbouring deserts of Beloochistan, to seize upon the government. The king of Cabul at one time undertook to drive them out; but found the task so difficult, that he ultimately consented to accept a tribute, which, however, was paid only scantily, when extorted by the appearance of an Afghan force upon the frontier, and has now entirely ceased. The rapacious chiefs who now tyrannise over Sinde, strangers to all arts of good government, seek only to extract from the country the utmost present advantage to themselves. In racking the land rents, they have broken up all the old tenures of the husbandman, and deprived him of all permanent interest in the ground. Protection being no longer afforded to commerce and property, the European nations have withdrawn

the important factories which they maintained at Tattah; and, of the fleets which formerly navigated the Indus, only small boats are seen ascending and descending. The Ameers have increased the desolation, by converting large tracts of the finest land into jungle, with the view of affording the amusement of hunting. To their other violences they add a spirit of bigotry, which impels them to relentless persecution against all who profess the Hindoo religion. The consequence of this misgovernment has been, that the revenue, which amounted at one time to eighty lacs of rupees, sank in 1813 to sixty, and was found by Mr. Burnes, in 1827, not to exceed forty. Yet the Ameers are supposed to have amassed a considerable treasure. They are particularly rich in jewels, which they studiously collect, and obtain, often at easy rates, amid the vicissitudes of the Cabul monarchy, from its fallen chiefs. Their collection of muskets and sabres ornamented with gems is supposed to be the most extensive in the world.

Tattah, from the causes now enumerated, has two-thirds of its area in ruins, and does not contain above 20,000 inhabitants. The streets are narrow and dirty, and the ordinary habitations, as usual in India, are only cottages of canes and mud. The old English factory is still the best house in the place. On a mountain, at the distance of a mile, are an amazing number of tombs, some of them very splendid; but the mosques and pagodas are in a great measure going to ruin. The decay of Tattah is hastened by the transference of the seat of government to Hyderabad. This place is situated higher up, about two miles from the Indus, on a branch called the Fulalee, by which it is formed into an island. There are some manufactures of arms and leather; but, instead of rivalling the former greatness of Tattah, it scarcely equals the present magnitude of that city.

The sea-coast of the Indian delta, in consequence of frequent inundation by the salt water, presents a desert of flat and marshy sand, nearly similar to that part of Egypt which immediately borders on the Mediterranean. Somewhat west from this river is Curachee, the only sea-port of Sinde, and which, from that circumstance, still retains some commercial importance. It contains a population of about 8000 people, among whom the Hindoos are the most active and industrious.

In making a circuit of the Ganges, and down the Indus, we have left an intermediate space of great extent, not traversed by these rivers or by any of their tributaries. This forms the province of Ajmeer, or Agimere, a rude, mountainous tract, which has scarcely been subdued by any of the conquerors of Hindostan. It is the native seat of that remarkable military race called Rajpoots, who present, both in figure and character, a complete contrast to the other Hindoos. They are tall, vigorous, and athletic; all their habits are rude, and their only trade is war. Although their territory approached at several points to within less than a hundred miles of the great Mogul capitals of Delhi and Agra, they never ranked even as regular tributaries of that empire. It was by pensions only that they were induced to join as auxiliaries in war. The Rajpoot chiefs, enjoying thus a succession of hereditary power, unbroken by foreign invasion, boast of a long line of ancestry, and are considered of higher birth than any other Hindoo rulers. Even the Mahratta chiefs, though far superior in power, conceived it an honour to form family alliances with them. They are by no means a degraded and enslaved race, like most other Hindoos; they have rahtores, or nobles, of different grades, who owe to the sovereign merely fealty and military service, and are nearly as independent as the chieftains in feudal Europe. Though turbulent and violent, they are considered by Tod as imbued with sentiments of honour, fidelity, and generosity, scarcely known among the inhabitants of the plain. They do not hold the female sex in that degraded state too general over India. The Rajpoot ladies are well informed, and regarded with somewhat of that romantic gallantry which prevailed in Europe during the middle ages. Yet they are guilty of a dreadful enormity, that of infanticide; many of the female children being murdered in the moment of birth: but this is said to be prompted by a preposterous pride, on account of the difficulty of procuring marriages suitable to their dignity, and even by a consideration of the enormous expense which it is supposed necessary to incur in the nuptial festival. Such is the extravagant display made on these occasions, that a year's income of the state is considered as a moderate amount. The only populous and powerful tract of this province is that reaching from Agra to Guzerat, on the western bank of the Chumbul. The country here does not present the same flat and sandy character as elsewhere: it is traversed by the long mountain chain of the Aravulli, on each side of which extend fine and fruitful valleys. It thus unites great military strength with considerable fertility.

Ajmeer, the capital of this province, being near the frontier of Agra, is not held by its native chiefs. It was an occasional residence of the Mogul emperors. For 600 years it has been a favourite resort of Mahometan pilgrimage, as it contains the tomb of a great saint, who is venerated even by the Hindoos. Eleven hundred attendant priests are maintained by the contributions of the pilgrims. The city has still a handsome palace, which was erected by the emperor Shah Jehan; but in other respects it is poor and in decay. The fort, built at the extremity of a range of hills, is of no great strength, but within it is

an ancient temple, which Colonel Tod considers as one of the most perfect monuments of Hindoo architecture. The surrounding country is flat and sandy.

The principal Rajpoot chiefs are those of Marwar, Mewar, and Jyepoor or Jyenagur. The first is the most powerful: the rajah's territories extend along the western border of the Aravulli, passing gradually into the desert. His capital is Joudpoor. His chiefs are brave and daring, and he is considered at present one of the chief native powers of India. He may be regarded as almost independent, though owning the supremacy of Britain. Mewar is a fine and beautiful valley, extending along the eastern side of the Aravulli. Its Rana, as he is called, is accounted the most noble of all these chiefs. His power, however, is inferior to that of the Marwar rajah; and a great part of his dominions, being contiguous to Malwa, the main seat of the Mahrattas, has been exposed to dreadful devastations from them. His capital of Oodipoor, however, is of peculiar natural strength; being enclosed, as well as several hundred surrounding villages, within an amphitheatre of hills, which can only be entered by one deep and dangerous defile. The palace of Oodipoor, on the borders of a beautiful lake, is peculiarly splendid; and that of Jugmundar, on an island in another lake, presents almost a magic scene. Chittore, once the capital, though now in decay, contains extraordinary monuments of ancient grandeur. The great column of victory, 122 feet high, and covered all over with exquisite sculpture, representing the principal objects of the native mythology, has been considered the most perfect specimen of Hindoo art. Jyepoor is the most easterly and the most fertile of these principalities. It is even supposed that, with a better government than it has yet enjoyed, it might yield a revenue of 120 lacs of rupees, about 1,500,000*l.* sterling. The capital, of the same name, is a handsome city, considered the most regularly built of any in Hindostan. The fortified palace of Umeer, built by one of the rajahs, is considered by Heber not inferior to Windsor.

The principalities now described are all arranged along the frontier of the central provinces of Malwa and Agra. As we recede thence towards the Indus, we enter a vast and trackless desert of sand, which gives to this part of India an aspect resembling that of Arabia and Africa. Mr. Elphinstone, in his route from Delhi to Cabul, had an opportunity of observing it. The country of the Shekbawuttee, a rude predatory tribe, commencing 100 miles from the first-mentioned capital, was interspersed with cultivated spots, and the sands were sprinkled with tufts of long grass, and of a green plant called phoke; and there were towns of considerable magnitude. In the next territory of Bikaneer, verdure was found only on detached spots, like the African oases. The traveller, however, was always refreshed with fine water-melons, the most juicy of fruits, which grew with their roots in the sand. The last hundred miles, between Pujul and Balwulpoor, presented a total absence of water or habitation. The ground was a flat of hard clay, which sounded under the feet like a board. Yet this most desolate portion of Ajmeer contains two chiefs of considerable power, those of Bikaneer and of Jesselmere. Bikaneer is populous, and its walls and towers present the aspect of a great and magnificent city in the midst of a wilderness. The dominions of the rajah of Jesselmere have been still less explored, it being only known that he reigns over a vast extent of desert, thinly interspersed with inhabited tracts; and that the population, composed almost wholly of native Hindoos, have never been subject to the Mogul, even in the greatest height of his power.

To the south of the mountainous and desert tracts of Ajmeer, and forming, as it were, its sea-coast, is the province of Cutch, extending from the Indus to the gulf of that name. The sterility here is but partially mitigated, though considerable numbers of horses and cattle are reared, and cotton forms an article of export. The inhabitants consist of a Rajpoot tribe called Jharejahs, subject to chiefs who boast of never having been conquered. Their habits are predatory, and they take advantage of their extensive sea-coast to carry on a system of piracy, for which considerable scope is afforded by the commerce of Malabar. It is remarkable, that the population, though purely native, were converted, without conquest or compulsion, to the Mahometan religion. They practise infanticide to an excess beyond any other tribe, the whole of the female children having long been sacrificed, because peculiar circumstances of situation and taste preclude them altogether from the possibility of obtaining suitable marriages for their daughters. The British government, in a late treaty by which they extended their protection to the chiefs of this district, exacted a stipulation that they should discontinue this criminal system; but Mr. Burnes suspects, from the small number of female children that make their appearance, that it is still extensively practised in the interior of palaces and castles.

On reaching the eastern shore of the Gulf of Cutch, we find ourselves in the province of Guzerat, which is peculiarly distinguished for the variety both of its aspect and population. It has districts as fertile and highly cultivated, and commercial emporia as flourishing, as any in India or in the world. Yet other tracts present the same rude and arid aspect, and are filled with the same wild and predatory races, as the desert provinces adjoining. The Gulf of Cambay, by which it is deeply indented, affords very large scope both for commerce and piracy. This situation has produced an unexampled variety of castes and races. Among these, a number who, under the names of Bheels, Callies, Coo-

lees, and Grassias, occupy the ruder tracts in the interior, despise all approach to civilization, and subsist chiefly by preying on their more opulent neighbours. The unfrequented shores, also, of the gulfs of Cambay and Cutch contain the holds of many desperate pirates. Guzerat has received the remnants of that oppressed and injured race the Magians, or ancient fire-worshippers of Persia, bearing still the appellation of Parsees. They are a peaceable, industrious, well-disposed people, to whom the province is indebted for much of its commercial prosperity. Surat numbers from 17,000 to 18,000, among whom are some of its richest merchants. They still retain their ancient reverence for fire, manifested by a peculiar reluctance to extinguish it; and also the strange custom of exposing their dead in handsome open tombs, to be devoured by birds of prey, with which their cemeteries are always crowded. They are divided into two classes, the mobids and behdeen, clergy and laity, who are allowed only under narrow restrictions to intermarry with each other. The female sex are more on a level with the male than in other Oriental countries, and are distinguished by propriety of conduct. The religious sect called the Jains are also very numerous in Guzerat.

The pride of Guzerat is in its cities. Surat, at the first arrival of Europeans, was the greatest emporium of India, and at present it ranks scarcely second to Calcutta. The population is usually, though perhaps with some exaggeration, rated at 600,000. It has suffered by the desolation which has overtaken many of the neighbouring districts, and by the British having established the chief seat of their commerce at Bombay. It still, however, carries on extensive manufactures of silks, brocades, and fine cotton stuffs; while it exports also the fabrics of other parts of Guzerat, and even the shawls of Cashmere. At the same time, by the Taptee, Nerbuddah, and the gulf of Cambay, it introduces foreign commodities of every description into central and western India. It contains many houses handsomely built of stone, but intermixed with those wretched cottages of reeds and mud which form everywhere the habitation of the ordinary Hindoos. Surat contains many very opulent merchants, chiefly Banians and Parsees. The former carry to a great extent all the peculiarities of their religion, and manifest in a peculiar degree their tenderness for animal life, by erecting hospitals for birds, monkeys, and other animals accounted sacred. Ahmedabad, the political capital of Guzerat, now included within the British territory, and Cambay, its port, at the head of the gulf of the same name, are still flourishing cities, though much decayed since the time when the former was the seat of an independent government. It still, however, remains a gay city, and sends round the neighbouring districts a tribe of itinerant poets, minstrels, and musicians. Baroach, which, under the ancient name of Barygaza, was the chief emporium of this coast, is described by Heber as poor and dilapidated, though situated in a delightful country, and carrying on still some trade in cotton. Baroda, now the capital of the Gwickwar, the principal native chief, is still large and flourishing. Dwaraca, an ancient and sacred city, and Puttun Sumnaut, whose temple, the richest in India, was destroyed in the eleventh century by Mahmoud the Gaznevide, are now chiefly remarkable for the crowds of pilgrims which they attract. Diu, situated on an island off this coast, has lost all the importance it possessed at the time when it was conquered by the Portuguese.

SUBSECT. 3.—*Central India; with the Deccan.*

On leaving Guzerat, we ascend into the high and strong centre of India, the seat of its powerful and refractory tribes, who never fully owned the supremacy of the Mogul, and maintain, even in face of the still more overwhelming power of Britain, a remnant of independence. This character applies peculiarly to the province of Malwa, or, as it has been called, Central India. It occupies that elevated table-land over which the Nerbuddah flows during the greater part of its course, and, being placed at the base of the great southern peninsula, separates Hindostan Proper from what is called the Deccan. According to Sir John Malcolm, this table-land is "in general open, and highly cultivated, varied with small conical and table-crowned hills and low ridges, watered by numerous rivers and small streams, and favoured with a rich productive soil, and a mild climate, alike conducive to the health of man, and to the liberal supply of his wants and luxuries." Though considerably above the general level of India, it seldom attains a greater elevation than 2000 feet above the sea. The climate is mild, and the soil, though generally of little depth, is not surpassed in fertility by any part of the empire. The most striking natural feature is the chain of the Vindhya mountains, which, extending from east to west, separates what is reckoned Malwa Proper from Nemaur, or the Valley of the Nerbuddah. The declivity of the Malwa side is small, but on the other is an abrupt and considerable ascent. The Nerbuddah rises near the eastern extremity of these mountains, in the district of Gundwana, close to the same spot which gives rise to the Soane. Its course is almost due west, parallel to the Vindhya mountains, of which it receives all the southern waters; and continues altogether for about 700 miles. It is not, however, navigable even for boats above 100 miles from its mouth, the upper course being completely obstructed by rocks and shallows.

The history of Malwa has been eventful, its strong position having rendered it often the seat of powerful, and even conquering governments. The exploits of Vicramaditya, one

of its early Hindoo kings, are much celebrated in Hindoo lore, though in a very indistinct and fabulous manner. Even after the Mahometan invasion, Malwa had Moslem rulers, among whom Mohammed Khiljee was pre-eminent; by him it was raised to a great height of power. As soon, however, as the Mahrattas, amid the decline of Mogul sway, began to pour in from the Deccan, rearing the standard of Hindoo independence, they were received with open arms in Malwa, which had always remained strongly attached to native ideas and institutions. This province soon became the seat of the most powerful chiefs, who thence spread their conquests over Hindostan. In the course of these struggles, a complete ascendency was gained by the houses of Scindia and Holkar, the founders of which rose from the lowest stations. Setting out in the character of officers of the Peishwa, the acknowledged head of the Mahratta government, they soon became his masters, and were only prevented from entirely crushing his power by the interference of Britain. As soon as her armies came into the field, the pride of these chiefs was humbled; they were confined to the provinces of Malwa and Candeish, and reduced to a tributary and dependent state. In 1817, however, when the bands of robbers, organised under the name of Pindarees, placed the British government in alarm, the Mahratta states manifested a general disposition to seize the opportunity of reasserting their independence. Among the chiefs of Malwa, however, only the Holkar family openly declared themselves. As they were completely defeated in the battle of Mehidpoor, and all their principal fortresses taken, Britain then dictated the terms of a peace, which established a subsidiary force in Malwa, and placed the capital and the heir of the house within her tutelage. Scindia, on account of some very suspicious movements made by him, was also obliged to receive a British garrison within his strong fort of Asseerghur. His force now consists of about 20,000 foot and 10,000 horse, while that of Holkar is reduced to less than 5000.

The population of Malwa has not been accurately ascertained, unless in regard to the territories of Holkar. These, including the domain of some dependent chiefs, were found to contain in Malwa Proper 634,732; in Nemaur, 129,161. A comparison with the extent, gave ninety-eight to the square mile; which might, it was supposed, apply with tolerable accuracy to the whole region. A remarkably small proportion profess the Mahometan faith; in some of the towns, not a twentieth. Those in the country are chiefly converted Hindoos, who, as they still cling to their original rites, are not held in any esteem by the orthodox Mussulman. The country, previous to its conquest by the British, was entirely over-run by professional robbers, acting under hereditary princes. Besides the Bheels on the Guzerat frontier, who boast of an ancient and venerable origin, both to themselves and their calling, there is a numerous class called Grassias, consisting of small chiefs, who have been driven out by more powerful neighbours, but who, mustering round them a few followers, endeavour to maintain by plunder a portion of their former state. With them the British mediated an agreement that they should relinquish this turbulent system, on receiving a revenue or compensation from the lands on which they had any claim.

Trade and every branch of industry had sunk to a very low state, in consequence of the continued system of predatory warfare of which Malwa had been the theatre. A caravan of merchants resembled a military expedition, requiring the escort of a large body of troops; and even this precaution did not ensure its safety. The territories of the different chiefs, also, are so crossed and intermixed with each other, as to cause an exaction of hostages, tolls, and customs, almost at every step. These evils have been in some degree counteracted by a remarkably bold system of insurance, which undertakes to cover all these hardships and charges. The insurers maintain a large body of troops; and, by an understanding with the princes and those concerned in levying the duties, they make very considerable profits. The staple article of export is opium, to the extent of 6500 maunds, of which the price has lately been upwards of 60*l.* per maund; but this is ascribed to casual circumstances; and the future average is not expected to exceed 25*l.* Cloths of superior quality, produced at Chanderee and other places, have also been in request all over India; and though their fabric has been interrupted by recent anarchy, it is now expected to revive. Nemaur produces a valuable breed of black cattle. The principal imports are silks, chintzes, and other fine manufactures, with British woollens; which last, however, are used not as apparel, but for trappings and ornaments. These, being all articles of luxury, have been materially diminished by the poverty of the country; but may augment, if it shall continue to enjoy the blessings of peace.

Among the cities of Malwa, the most ancient, and still the most important, is Oojein. It is situated about seventy miles north of the Nerbuddah, on the Sepra, a small river tributary to the Chumbul. Oojein holds a high rank among the sacred cities of the Puranas; and the Hindoo geographers have even fixed on it as their first meridian. Under the name of Ozene, it is mentioned as a great interior capital by Ptolemy and the author of the Periplus. The modern town stands at some distance from the old site, which was overwhelmed by a change in the channel of the river. Of late years it derived great additional lustre from being chosen by Scindia for his capital; and its circuit of six miles was filled with a crowded population; but he has now quitted it for Gwalior. A large proportion consists of Mahomet-

ans, who have built four handsome mosques. Indore, the capital of the Holkars, is a modern place, raised from a village by the Princess Alia Bhye, the most illustrious ruler of that race. As a capital, it is still not of very great magnitude. Dhar, the ancient Dharanuggur, is a place of very great antiquity, and appears at one period to have been a most flourishing capital. Though not occupying above a fourth of its former site, it is still the residence of an independent rajah, Rumchunder Picar, who reigns over a very fertile district, yielding him a revenue of 125,000 rupees. Nemaur, a rich pastoral district, composed of the valley of the Nerbuddah, has for its capital Mheysir, pleasantly situated on the right bank of the river, and raised to its present rank by Alia Bhye, who made it her residence, and adorned it with a number of beautiful temples. In the district of Harrowtie, bordering on Ajmeer, Kotah has been raised by its present rajah, Salim Singh, to be one of the most opulent and beautiful cities of Malwa. The conduct of this prince, at once prudent and vigorous, has rescued him and his people from all the calamities and wars which have lately desolated central India, and has converted his little principality into the most effective and flourishing of its states. He maintains a well disciplined army of 25,000 men, and enjoys a revenue of 4,700,000 rupees. Near Kotah, at Barolli and Jhalrapatun, Colonel Tod discovered temples, which, in the beautiful profusion of sculptured ornaments, surpass those found in any other part of India. Jhalrapatun has become a great seat of inland trade. Bhopal, a town situated on a lake upon the immediate frontier of Gundwana, is the capital of a rajah, who reigns over an uneven, jungly, but in many places fertile tract. This prince, after suffering severely from an unequal contest with Scindia, has had his power and territory augmented by the friendship of Britain. He now maintains an army of 6000 troops, with 180 guns, and draws a revenue of 900,000 rupees. Rath is the name given to a wild, hilly, and wooded district bordering on Guzerat. It is occupied by Bheels, and a number of petty predatory princes, who has each his little capital; but it contains no city of magnitude. Bagur and Kantul are districts of similar character, continued along the frontier of Ajmeer. This range of territory conceals many beautiful valleys, and presents also numerous monuments of antiquity, of which the most remarkable are the excavated temples near the town of Bang, in Rath. A few remains, covered with jungle and crumbling to pieces, alone survive of the glory of Mandoo, which, raised by Mahommed Khiljee, during the period of the greatest prosperity of Malwa, attained a magnificence never equalled by any other capital of central India. Like Babylon, it seems to have been rather a fortified district than a mere city; being thirty-seven miles in circumference, and enclosing 12,650 acres. It occupied the crest of the Vindhya mountains, and was enclosed on all sides by a rugged natural ravine, which a strong interior wall rendered almost inaccessible to Indian attack. Nothing is left of this noble city but a small fort, frequented by religious mendicants, and some fragments of tombs and palaces, sufficient, however, to attest its departed grandeur. The ancient city of Woon, in Malwa, is distinguished by some very splendid architectural remains.

After passing the Nerbuddah commences the division of India called the Deccan, a large expanse of territory, filling all the broadest part of that triangular peninsula which has its vertex at Cape Comorin, while its base is formed by the Nerbuddah, and by a line continued from that river to the mouths of the Ganges. This region, with the exception of the sea-coast, from which it is separated by the Ghauts, composes a table-land of some elevation, though inferior to Malwa on one side, and to Mysore on the other. It thus enjoys a happier climate, and displays more brilliant vegetation, than can be attained without inundation, on the level plains of the tropic. The Deccan is watered by two rivers, second, indeed, to those of Hindostan Proper, but still great and sacred streams: the Krishna, or Kistna, and the Godavery, which both rise in the Western Ghauts, and flow across the entire breadth of the peninsula. The former, bearing the name of one of the most popular Hindoo deities, has a course of about 650 miles, the latter of about 850. The Deccan, separated from Hindostan Proper by a considerable space, and by strong natural barriers, was never reduced by foreign invaders to nearly the same entire subjection. The Mogul empire, in its greatest energy, scarcely held Viziapoor and Golconda as more than tributaries. As soon as the strength of that empire was shaken, the Mahrattas severed from it the principal Deccanee provinces, and pursued beyond those boundaries their career of conquest and ravage.

Candeish, or Khandeish, a long narrow province, extending along the southern bank of the Nerbuddah, is, perhaps, the strongest military country in the world. It is entirely studded with that species of fortress, seemingly formed by nature to be absolutely impregnable. Solitary hills, composed of surrounding perpendicular walls of rock, with a plain on their summit, require only slight artificial defences to become impregnable alike to sap, artillery, and assault; and yield only to the influence of panic or famine. In the last campaign, before the war of sieges began, the spirit of the confederacy was entirely broken by the total rout of the Holkar forces at Mehidpoor; and the different killedars or governors sought little more than to make a decent show of resistance. Though Candeish has a surface thus diversified, it is not, generally, a mountainous territory; many parts of it are capable of high cultivation, and, notwithstanding the late scenes of war and devastation, are rendered surprisingly productive. Besides the bounding stream of the Nerbuddah, this pro-

vince is traversed by the Taptee or Tuptee, which, falling into the sea at Surat, after a course of 500 miles, would afford, in peaceable times, ample facilities for commerce.

The most important among the forts of Candeish, and the centre of the strength of Scindia, is Asseerghur. A perpendicular rock, of the kind common in this part of India, rises above its surrounding bed of small hills. On one side, indeed, it is almost accessible; and there it is defended by two retaining walls, which form, however, an imperfect substitute for the natural rocky barrier. In the last war, neither the supplies nor the defences were found to answer expectation. The vicinity consists of wild ravine and jungle, dreadfully infested with tigers. Malligaum is on the frontier of Aurungabad, to which some consider it as belonging; but the narrator of the late Indian campaign considers it as the key of Candeish, and reports an Indian proverb, "Get but possession of Malligaum, and you have Candeish by the nose." It is a solitary hill, in the midst of a rich, extensive, and completely level plain; but its strength seems less due to natural position, than to its lofty walls, the succession of exterior works, and of six strong gateways, which bar the approach. It stood a month's hard siege by the British in the last campaign. If Malligaum owes so much to art, nature has done all for the splendid fortress of Unkie Tunkie. A more complete specimen of natural fortification seems scarcely to exist. On every side the perpendicular wall rises to the height of 150 to 200 feet, enclosing on the top a level plain of a mile in circuit. The ascent is by flights of steps cut in the solid rock, secured by the strongest possible gateways. It has copious magazines, granaries, armouries, all hewn out of the rock, and thus setting bombardment at defiance. It was only, therefore, through the determination of the rajah to abandon a sinking cause, that the attack of the British, on the 5th of April, 1818, was immediately successful, and their flag was seen "waving on the lofty and beautiful battlements of Unkie." Trimbuck, on a larger scale, is a tremendous and wonderful hill-fort, impregnable to any army or artillery, however numerous. It measures ten miles round its base, and about four round its upper surface. The ascent is by a flight of 200 almost perpendicular steps; but it is impossible, without danger, to look back on the perilous steep of 600 or 700 feet beneath. From the top of this hill descends, falling drop by drop, the rill which forms the source of the great Godavery. In crossing the Tuptee, the English troops almost unexpectedly came upon Talnair, which defends its passage, and owes its chief strength to the being surrounded on all sides either by the river or a deep ravine. Burhaunpoor, formerly the capital of Candeish, is still a large city, strengthened by a fort which, however, has never made any formidable resistance. The city is distinguished chiefly by being the head-quarters of a Mahometan sect called Bohrahs, whose habits are very commercial, and of whom 6000 reside in Surat.

Directly south from Candeish, and forming the western part of the Deccan, stretch the large provinces of Aurungabad and Bejapoor, containing the original seats of Mahratta power. They present a great similarity in their general aspect; the surface being rugged, irregular, and among the western Ghauts even mountainous. These provinces are watered by the upper streams of the Kistna and the Godavery, not yet become rivers of the first magnitude. The soil is in some parts dry and rugged, but in many is capable of the highest culture. It supports, accordingly, a population which, though not supposed equal to what it is capable of maintaining, is estimated, in Aurungabad at 6,000,000, and in Bejapoor at 7,000,000. These two provinces are strong in a military sense; containing many natural fortresses, though neither so numerous nor so complete as those of Candeish. They have never been subject, for any length of time, to the general government of Hindostan. Even after the reduction of the native governments, Adil Shah, in 1489, founded the kingdom of Bejapoor, or, as it was called in Europe, Viziapoor, which held high sway over the Deccan, till the year 1689, when it yielded to the arms of Aurengzebe. Scarcely, however, had this conquest been completed, when the Mahratta power arose, which disputed the conquests of that emperor, and soon drove his feeble successors from all this part of India. Poonah then became the residence of the Peishwa, and the chief nominal seat of Mahratta sovereignty; though the success of the rebel houses of Scindia and Holkar transferred the real seat of that power to the more northern provinces.

Poonah, thus become metropolitan among the Mahratta cities, is, however, by no means the most splendid. None of its sovereigns possessed that peaceful wealth which could enable them to indulge the Oriental taste for costly architecture. It seems to have been originally destined rather for a camp than a city; and in the great assemblages of the Mahratta confederacy, nearly 500,000 have mustered in and around it. The fixed population does not exceed 100,000. It resembles a huge village rather than a city; the houses are irregularly built, chiefly of slight brick walls, by which even the palace is entirely enclosed. For resisting the violent rains, these structures depend chiefly on interior timber frames: they are painted with innumerable representations of the Hindoo Pantheon. The markets are plentifully supplied with provisions of every kind. Poonah is now included in the British territory, and attached to the presidency of Bombay. Satara, a hill-fort, about fifty miles to the south, after being long the state prison of the hereditary rajahs, became the nominal capital, since Britain deposed the Peishwa, and restored the ancient head of the confederacy to

some degree of power; but, as this sway is limited, Satara will not probably rise to the rank of a great city.

A very different degree of magnificence is perceptible in the remains of the ancient capital of Viziapoor, or Bejapoor. The fort is, perhaps, the largest in the world, being eight miles in circumference, and containing numerous gardens, mosques, and palaces. The great mosque of Adil Shah, which cost 700,000*l.*, and occupied 6500 men for thirty-seven years, is still in tolerable preservation. The fort, with the city, separated from it by a large plain, now presents a district covered by ruins, interspersed with several detached towns, the population of which has not been estimated. Aurungabad and Dowlatabad form two great ancient capitals, almost contiguous to each other. The latter, originally called Deoghir, is the most ancient; and in the fourteenth century Mahomet III. made extraordinary efforts to render it the general capital of Hindostan. It is very strongly situated on the side of a hill, and, being well fortified, is considered as the key of the Deccan. Till the Mogul conquest, it gave name to the province; but Aurengzebe conferred the former appellation (Aurungabad) on the neighbouring village of Gurka, which he soon made the capital of the Deccan. Both cities are still populous, and contain vestiges of ancient grandeur. At present, they form part of the dominions of the Nizam. Ahmednuggur, once the capital of another powerful dynasty, and still a considerable city, is now included in the British territory.

Near Dowlatabad are found the wonders of Ellora, perhaps the most extensive and surprising monuments of ancient Hindoo architecture. They consist of an entire hill, excavated into a range of highly sculptured and ornamented temples. "The number and magnificence of the subterranean temples," says Mr. Erskine, "the extent and loftiness of some, the endless diversity of sculpture in others, the variety of curious foliage, of minute tracery, highly wrought pillars, rich mythological designs, sacred shrines and colossal statues, astonish but distract the mind." It appeared truly wonderful "that such prodigious efforts of labour and skill should remain, from times certainly not barbarous, without a trace to tell us the hand by which they were designed, or the populous and powerful nation by which they were completed." The courts of Indra, of Juggernaut, of Parasu Rama, the Doomar Leyna, or nuptial palace, are the names given to several of these grand excavations. But the greatest admiration has been excited by the one called *Keylas* or paradise, consisting of a conical edifice, separated from the rest, and hewn out of the solid rock, 100 feet high, and upwards of 500 feet in circumference, and entirely covered with mythological sculptures.

The interior of the Deccan, to the eastward, comprising the provinces of Hydrabad, Nandere, Beeder, and the greater part of Berar, composes a large surviving fragment of the Mogul empire, under the government of the Nizam. This officer, at first a mere viceroy, took advantage, like others, of the downfall of the empire, to assume independence. Having connected himself by alliance with Britain, he was enriched with the spoils of the Mahratta empire, and finally obtained a territory extending upwards of 400 miles in length by 200 in breadth, and containing more than 8,000,000 inhabitants. Though allowed, however, to carry on the internal government, he is kept in a state of entire dependence as to all his foreign relations; and a subsidiary, or, more properly, a ruling, force is constantly stationed in his capital. So irksome, it is suspected, does the Nizam feel this protection, that he was strongly inclined, in the last war, to join the Mahratta confederacy; but, if he entertained any such intention, the rapid success of the British arms deterred him from open hostilities. The whole of this territory is a table-land, diversified by hills considerably less lofty than those of the Western Deccan. It has many fertile spots, particularly in the small province of Nandere, extending along the Godavery, and in the more southerly one of Beeder. It benefits little by its exemption from foreign internal sway, being one of the most oppressed and misgoverned districts in India, without wealth or population adequate to its natural resources. It has no flourishing manufactures, and the import of European goods is not supposed to exceed the annual value of 25,000*l.*

Hydrabad, capital of the province of the same name, may be considered also the present capital of the Deccan, the removal of the Nizam thither from Aurungabad having attracted to it a population of about 120,000. It is seven miles in circumference, surrounded by a wall, not sufficiently strong, however, to convert it into a military position. Though not a fine city, Hydrabad contains some handsome mosques; and the Nizam maintains, on a smaller scale, a semblance of Mogul pomp. He has large magazines filled to the ceiling with fine cloths, watches, porcelain, and other ornamental articles presented to him by European embassies.

About six miles from Hydrabad is Golconda, formerly the capital of a kingdom which has a splendid name in Europe, from its diamond mines in the subject district in Gundwana. It is situated on a high rock, so strong by nature and art that it is believed by the natives to be impregnable. No European has ever been admitted. The vicinity is adorned with a

number of splendid tombs. Warangol, about fifty miles from Hydrabad, presents only the ruins of the ancient metropolis of Telingana, when that name, now only applied to a language, designated a large extent of eastern and central India. Nandere and Beeder, capitals of their respective provinces, are both fortified towns, but not of remarkable extent. Of Beeder, it has been remarked, that in its vicinity are spoken the three languages of the east, west, and south; the Telinga, the Mahratta, and Canara. The most northerly part of the territories of the Nizam consists of that largest part of Berar, of which Ellichpoor is the capital. The province is high, rude, and in general imperfectly cultivated, though its bullocks are reckoned the best in Hindostan.

The eastern portion of Berar, with the greater part of the rugged border province of Gundwana, forms the domain of the rajah of Nagpoor, or of Berar, chief of what are called the Eastern Mahrattas. Ragojee Bhoonslah, the founder of this dynasty, boasts a higher descent than the Peishwa, though he began his career only as an officer under that personage. In 1803, he joined Scindia against Britain; but the signal successes gained by General Wellesley obliged him to consent to a treaty, by which he ceded the district of Cuttack in Orissa, and a great part of Berar. In 1817, the rajah, Appa Sahib, at the commencement of the campaign, lulled the British into security by lavish professions of fidelity; but on the 27th of November the Arabs in his service made a sudden attack on their corps stationed at Nagpoor, and it was not without great loss that they were repulsed, and obliged to quit the place. The rajah then offered a semblance of submission; but soon afterwards seized an opportunity of escaping and joining the enemy. The issue of the campaign converted him into an exile and a fugitive. The British placed on the throne his son, a youth; but arranged that all affairs should be carried on by a regency, the leading member of which was their own resident. Nagpoor, chief among the cities of the rajah, raised from a village by Ragojee Bhoonslah, contains about 80,000 inhabitants, but is meanly built, and possesses no great strength as a fortress. The bulwark of the territory is considered to be Gawilghur, in Berar. This strong-hold, consisting of an outer and an inner fort, is built on a high rocky hill, and was regarded by the natives as impregnable, till 1803, when it yielded in a few days to the army of General Wellesley.

Gundwana, with a few exceptions, is the poorest and rudest province of Hindostan. It is mountainous, ill-watered, covered with jungle, and thinly inhabited; it was consequently almost neglected by the Mogul potentates, and left to the Goands, its almost savage native possessors. When the Mahrattas, however, established a government at Nagpoor, they took possession of all the parts that were at all valuable or cultivated, and the Goands were driven into the highest and most inaccessible tracts, from whence they descend only for the purposes of plunder.

Orissa, to the east of Gundwana, occupies the whole sea-coast of the Deccan, from the Carnatic to Bengal. The interior, traversed by a portion of the great chain of the Ghauts, is still more rugged than Gundwana: it is marshy, covered with jungle, and infested by a dangerous malady, called the hill-fever. The Oureas, a tribe of fierce and rude natives, inhabit these wild recesses, and render themselves formidable to the Mahrattas; but the influence of British law has converted them into peaceable subjects. The three great rivers, the Mahanuddy, Godavery, and Kistna, discharge themselves into the sea; the first at the northern, and the two latter at the southern extremity of this province.

The Circars, comprising that part of Orissa which is situated between the Ghauts and the sea, is of quite a different character from the interior regions now described: it is indeed one of the most valuable districts in Hindostan; equal to the Carnatic in fertility, and superior in manufacturing industry. It is remarkable, also, as being the first territory of any considerable extent which came under the dominion of the East India Company. The French, in 1759, having been driven from Masulipatam, Lord Clive obtained from the Mogul the grant of the territory; and the Nizam, though then in actual possession, was not in a condition to dispute the transaction. The internal government has not been materially altered, the villages being ruled according to their ancient institutions; but the power of the zemindar, who, at the first occupation, could assemble 41,000 troops, has been greatly broken. Calicoes and chintzes are the staple manufacture, the finest of which are produced on the island of Nagur, forming the delta of the Godavery. These manufactures are exported to Europe, and various parts of the East, but particularly to Persia, where the demand for them is most extensive. The Circars are five in number; Guntoor, Condapilly, Ellore, Rajamundry, and Cicacole: Masulipatam has lately been considered as forming a sixth.

The important trade of this district centres almost entirely in Masulipatam, a large seaport, with the best harbour in the whole coast from Cape Comorin. More than half of its exports are to Bassora, the rest chiefly to Madras, which it supplies with a considerable quantity of grain.

Cuttack, traversed by the lower Mahanuddy, forms an extensive district, connecting the

Circars with Bengal. It is in many parts fertile, with some flourishing manufactures; and it supports a population of 1,200,000 people. Cuttack, the capital, situated on a broad channel of the Mahanuddy, is a town of importance. But the most remarkable district and place is in the holy land of Juggernaut, which comprises a circuit of fifteen miles, and has already been described as the strange and horrible scene of Indian fanaticism and idolatry.

In surveying the Western Deccan, we purposely reserved the coast, which displays a character quite different from the interior. It contains one grand feature, Bombay (*fig.* 630.), the western capital of British India. This city is situated on a small island connected by an artificial causeway with the larger one of Salsette. It commands a beautiful view over a bay, diversified with rocky islets, and crowned by a back-ground of lofty and picturesque hills. Tanna, in Salsette, was the original settlement of the Portuguese. Attracted by the fine harbour of Bombay, they erected a small fort there; but none of their establishments on this coast were allowed to rival Goa. In 1661, Bombay was ceded to Charles II., as part of Queen Catherine's portion; two or three years after, a settlement was established, and in 1686 the chief seat of English trade was transferred thither from Surat. Since that time, Bombay, notwithstanding considerable vicissitudes, has continued on the whole in a state of constant increase, and has become the great emporium of western India, with a population of 220,000. Of these, about 8000 are Parsees, the most wealthy of the inhabitants, and by whom its prosperity is mainly supported. There are also Jews, Mahometans, and Portuguese in considerable numbers; but the Hindoos comprise three-fourths of the whole. The presidency of Bombay is not of the same extent with those on the eastern side of the empire, being closely hemmed in by the great holds of Mahratta power in the Deccan. It includes, however, Surat, Baroach, and the finest districts of Guzerat; and thus comprehends a population of about 6,250,000. Bombay has a governor and council, subordinate to the supreme government at Calcutta. It contains also a court of judicature, administered by a single judge, with the title of Recorder. The number of civil servants in the establishment amounted, in 1811, to seventy-four, and the appointments of the whole civil service to 174,238*l.* A literary society has been established at Bombay, chiefly with a view of exploring the learning, history, and antiquities of India. The commerce direct with Britain is not so extensive as that of the other two presidencies, the adjacent territory affording few of the staple Indian commodities. The exports, not exceeding 200,000*l.*, consist chiefly of miscellaneous articles, collected from different parts of India. The Concan and Guzerat supply it with grain and provisions, and the latter with fine manufactures, which are re-exported to every part of the East. Pepper and other spices are drawn from Canara, and raw silk in large quantity from Bengal. The communication with China is extensive, that empire furnishing many articles suited to the consumption of the natives, and receiving a large supply of opium. The intercourse with Cutch, Sinde, and the Persian Gulf, is also considerable. The total imports, in 1811–12, amounted to 16,970,000 rupees, and the exports to 14,550,000.

630

Bombay.

The vicinity of Bombay is distinguished by the most ancient and remarkable of the religious structures formed by the Hindoos. The most celebrated is that of Elephanta (*fig.* 631.), on a small adjoining island of the same name. It is situated about three-quarters of a mile up the side of a mountain, from the rocks of which it is entirely excavated. The entry is by four rows of massive columns, forming three magnificent avenues. The interior is 220 feet long by 150 broad, but little more than fifteen feet in height. The most remarkable object consists in three colossal heads, which have been supposed to be those of the Hindoo Trinity; but it seems now agreed that they are only different representations of Siva.

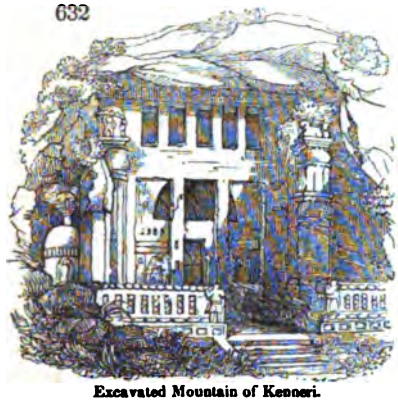
631

Elephanta.

The caves of Kenneri, on the larger island of Salsette; and those of Carli, on the opposite shore of the continent, present phenomena almost equally striking. The mountain of Ken-

neri, according to Mr. Forbes, appears to have had a city hewn in its rocky sides (*fig.* 632.), capable of containing many thousand inhabitants. There are tanks, terraces, flights of steps; every thing that could conduce to their accommodation: yet the ground is now never trodden by a human footstep, except that of the curious traveller. There is a cavern-temple, the interior (*fig.* 633.) of which, though less spacious than that of Elephanta, is loftier, and adorned with more numerous ranges of columns. The cave-temple at Carli is on a still greater scale than that of Kenneri.

632



Excavated Mountain of Kenneri.

The coast extending south from Bombay is called Concan. It consists of a strip of territory about forty miles in breadth, sloping down from the Ghauts to the sea. Though uniform in its general character, it is broken into a number of little bays and harbours, while the rising grounds behind afford an extensive prospect over the sea. These advantages, in a maritime district, which forms a great commercial thoroughfare between flourishing states, caused it to be frequented at an early period by predatory adventurers, and it then acquired the appellation of the "coast of the pirates," which has ever since been strictly applicable. Towards the close of the seventeenth century, Angria, a piratical chief, established there an extensive power, which yielded, however, in 1756, to the united arms of the British and the Mahrattas. The territory was at first annexed to that of the Poonah Mahrattas; but it is now, with the exception of a small portion, subject to the Rajah of Colapoor, and almost wholly under British control.

633

Interior of Temple.

Goa, at the southern extremity of the Concan, having been captured by the Portuguese in 1510, became their principal settlement, and was long the European capital of India. Even in its present utter decay, it retains traces of its early magnificence. The cathedral, and the convent of the Augustines, are superior to any other specimens of European, and perhaps of native, architecture in India. It retains an air of gloomy monastic grandeur. A territory of forty miles in length, and twenty in breadth, is still dependent upon it; but the settlement seems almost entirely abandoned by the government at home.

Subsect. 4.—*The South of India.*

In passing the confines of Viziapoor and the Concan, we leave all that ever constituted part of the Mogul empire, or at least was regularly apportioned among its provinces. The south of India, reaching from this point to Cape Comorin, is divided into a number of little kingdoms, always independent, until they were absorbed under the dominion of Britain.

We shall begin with the maritime tract of Malabar. This name properly belongs to a small kingdom, of which the capital, Calicut, was found by the first Portuguese navigators to be the seat of a most ample dominion, under a sovereign called the Zamorin. Hence Malabar has extended its name to the whole of the tract in question, and has even been applied loosely to all the western coast of the peninsula, as far as the Gulf of Cambay. Considered as the coast reaching from the Concan to Cape Comorin, it forms a region 500 miles in length, thirty or forty in breadth, interposed between the Indian Ocean and the almost continuous chain of the Western Ghauts. This position supplies it with copious moisture. Its surface, rugged, rocky, and irregular, may be rendered highly productive with careful cultivation, which is generally bestowed. It yields very large crops of rice, forming an article of export to Bombay and the northern coasts. But the staple of its European commerce is pepper, produced in greater abundance and perfection than in any other part of the globe. It produces, also, very copiously, the noted Indian luxury of the betel leaf and areca nut; likewise ginger, cardamoms, and several other spices. The upper districts abound with fine timber, particularly the teak, so pre-eminently valuable for ship-building; also sandal, sapan, and other dyeing and ornamental woods. The region does not contain

any fine or flourishing manufactures; but with its grain, timber, and spices, purchases the fine cottons of Guzerat.

Social life, throughout Malabar, presents a varied and often very peculiar aspect. The original structure of Hindoo society has not been altered by foreign conquests, though varied by some casual migrations; but it has assumed within itself some forms decidedly in contrast with those which it elsewhere exhibits. The tyrannical prejudices of *caste* are carried to a more violent and inhuman pitch than in the rest of India. If a cultivator (*tiar*) or fisherman (*mucua*) presume to touch one of the *nairs*, or military class, the nair is considered fully justified in killing him on the spot. The same fate befalls the *paria* who ventures even to look him in the face, and does not, on seeing him at a distance, instantly take flight. This last race are all slaves; a condition not common in the rest of Hindostan. But there is another class of sufferers, whom a barbarous pride has stripped beyond any other of the most common rights of humanity. The *niadis* are excluded from all human intercourse, forced to wander in unfrequented places, without any means of support, except the alms of passengers. These they endeavour to attract, by standing at a little distance from the public road, and "howling like hungry dogs," till the charitable wayfarer lays on the ground some donation, which, after his departure, they hastily carry off.

While these unhappy races are kept in the lowest misery, the nairs, or nobles, revel in extravagant pomp and gaiety. This remarkable body are, in the Hindoo system, classed as sudras, though they rank immediately under the brahmins, the intermediate classes being here wanting. Indeed, they are manifestly equal in dignity with the cshatryas of North-western Hindostan. Their most peculiar but least honourable characteristic consists in the arrangements with regard to the nair females. For them a system of the most shameless profligacy is marked out, and enforced even by sacred sanctions. They are married at ten years of age, and have an aliment transmitted to them by their husband, whom they must not, however, see, or hold any intercourse with: a single instance of such connexion would be considered scandalous. They reside with their mother, and, after her death, with their brother; and they are allowed, and regard it an honour, to attract as many lovers as possible, provided they be of equal or superior rank. It is thus considered a ridiculous question to ask a nair who is his father. The only real parentage rests with the brother of the wife, whose children are considered as belonging to him, and to whom all his property and titles are transmitted.

A striking peculiarity, on the Malabar coast, consists in the early colonies of Christians and Jews, which still form a considerable part of its population. So numerous are the former, as to give Malabar, in many quarters, the appearance of a Christian country: they are computed, on the whole, at from 100,000 to 150,000. They derive from a somewhat doubtful tradition the title of Christians of St. Thomas; yet their origin really does not appear to be much later than the apostolic age. Their original form of worship was simple and primitive; but the Portuguese, who at an early period became masters of this coast, considering such worship as heresy, began a violent persecution, by which these poor people were at length obliged to admit into their churches saints and images, to embrace the doctrines of purgatory and transubstantiation, and to treat the marriage of priests as unlawful. They could not, however, be induced to hear the service read in Latin: the Portuguese were obliged to concede this point, and allow the use of the Syriac. A sort of Syro-Roman church was thus formed; but Dr. Claudius Buchanan, on penetrating into the interior of Travancore, discovered a body of these Christians in their original simplicity. The intelligence of the people, the virtuous liberty of the female sex, and the whole aspect of society, seemed to indicate a Protestant country. They were poor, having suffered much from the Portuguese, but now enjoy almost entire toleration.

The Jews of Malabar, who amount to about 30,000, are divided into White and Black, forming quite distinct classes; the white considering the other as comparatively low and impure. They are supposed to have arrived not very long after the destruction of Jerusalem; and in 490 obtained the gift of the city of Cranganore; but, having incurred the hostility of a neighbouring potentate, this settlement was broken up and dispersed. The black Jews have been supposed by some to be Hindoo converts; but Dr. Buchanan rather imagines them to be of an earlier race, who emigrated at the time of the Babylonish captivity. Both tribes have Hebrew manuscripts of the Old Testament, which appear to be preserved in a state of tolerable purity.

In surveying this coast in detail, we begin with Canara, which extends along the sea about 200 miles. The northern part is very hilly, and produces chiefly teak wood; but the southern, called by the natives Tulava, is well cultivated, and exports large quantities of rice. The former contains about 7000, the latter about 80,000 houses; and we may reckon about five inhabitants to each house. Hindoos of that peculiar sect called the Jains abound in the country. There are also a considerable number of Christians; but the sea-coast is chiefly possessed by a class of Mahometans called Moplays, apparently emigrants from Arabia. Through their means, Hyder and Tippoo were complete masters of Canara, and the latter

carried on a violent persecution against the professors of all other religions. After his fall, however, Canara, in 1799, was annexed to the British dominion, and toleration was restored.

The principal city of Canara is Mangalore, long a flourishing emporium. It suffered in the war between the Mysore sovereigns and the British government. Being taken by the British in 1733, it was defended with extraordinary valour against the whole force of Tippoo. In the following year, it was surrendered by treaty to that prince, who then dismantled the fortifications. Since coming under British dominion, Mangalore has flourished, and carries on a very great export of rice. It is situated on a peninsula formed by a very beautiful arm of the sea, and on the bank of a considerable river. The port will not admit vessels drawing more than ten feet water; but the anchorage at the mouth of the river is good. Onore, Carwar, and Barcelore were deprived, by the devastations of Tippoo, of the great trade they once possessed, but are reviving under British auspices.

Proceeding southwards, the next district is that of Malabar Proper, which occupies about 200 miles of coast, and contains upwards of 600,000 inhabitants. The soil immediately along the shore is poor and sandy; but in the interior it consists of hills, the sides of which are formed into terraces, with fertile valleys interposed. Pepper, abundantly raised in the hill-forests of this country, forms the staple of a very extensive foreign trade. Calicut, which first gave to De Gama an idea of the splendour of Indian cities, was the residence of the Zamorin, whose empire then extended wide along Malabar. Its power was materially broken by unsuccessful contests with the Portuguese; and, towards the close of the last century, was finally destroyed by the invasions of Hyder and Tippoo. In the struggle which terminated in the downfall of the latter, Britain derived some aid from the native chiefs, who in return were invested with the internal jurisdiction of the country, subject to the payment of a regular tribute. Between powers placed in so delicate a relation, dissensions were not long of arising; and conflicts ensued, which terminated in favour of the British, who assumed the uncontrolled dominion of this country, its territory being annexed to the Madras presidency. The Zamorin, like the Mogul, is now a stipendiary of the British Indian government.

Calicut, the once proud capital of Malabar, was entirely destroyed by Tippoo; but, as soon as British ascendency permitted, the inhabitants, animated by that local attachment which is strong in India, hastened to return. It is now supposed to contain from 20,000 to 30,000 inhabitants, and has an improving trade. The most remarkable modern city, however, has been Cananore, the seat of a great female potentate called the Biby; and, from its almost impregnable position, regarded as the main hold of the Moplays or Mahometans of Malabar. The Biby is still allowed to administer Cananore and the fine country in its immediate vicinity. She carries on also considerable mercantile transactions with Bengal and Arabia, and includes in her sovereignty the Laccadives, an archipelago of low shoaly islets, facing the coast of Malabar, at the distance of from seventy-five to 150 miles. They, however, produce nothing but betel and plantains, and are inhabited by poor Moplay fishermen. Tellichery, long the principal English settlement and seat of trade, still contains many rich merchants, and a polished society: but since the capture, in 1793, of Mahé, then the principal French settlement, the preference has been given to that place, which has the advantage of a particularly fine situation.

South of Malabar Proper is the small province of Cochin, which presents the same general aspect as the rest of the coast, and particularly abounds in teak timber, though the finest trees have now been cut, without any care to renew them. The Jewish and Christian colonies are particularly numerous in this territory. Cochin, the capital, was the first point at which the Portuguese were allowed to erect a fort. In 1663, it was taken by the Dutch, and was rendered by them one of the most flourishing cities of India. The rajah has maintained his independence better than most Hindoo princes. He was merely tributary to Tippoo, and is allowed even by Britain to carry on the internal affairs of his state, though under payment of a heavy tribute. Cochin still enjoys a considerable trade. Ten miles to the north is Cranganore, which the Portuguese have made the seat of a bishop's see, holding authority over eighty-nine churches.

The extended line of coast from Cochin to Cape Comorin is filled by the dominions of the Rajah of Travancore. They contain a population of about 2,000,000, and possess all the advantages peculiar to the Malabar coast. The inland districts, in particular, are remarkable for fertility and beauty. They exhibit a varied scene, consisting of hills clothed with lofty forests; and of winding streams, with valleys clad in perpetual verdure. The woods are perfumed with numberless aromatic plants. Besides the staple article of pepper, Travancore yields ginger, turmeric, and inferior species of nutmeg and cinnamon. The rajah, like that of Cochin, conducts the internal affairs of his dominions, but on a footing completely subject and tributary to the Company. An attempt made in 1809 to shake off this yoke only riveted his chains the closer. Travancore, the ancient capital, is situated somewhat up the country, in a soil of white sand; but it is much decayed since the rajah removed to a new palace, built on the European model, at Trivandapatam. Trivander, Coulan, Anjengo, and Coleshy, afford

convenient havens for trade, though the strong currents which run along the coast render navigation difficult.

At the extreme point of the territory of Travancore is situated Cape Comorin, the southern boundary of India; a bold and commanding feature, which presents to the ocean a lofty hill covered with the most brilliant verdure; but the rocks scattered along the shore render it necessary for the navigator to keep at a distance.

After turning Cape Comorin, we find ourselves in that extensive territory, to which Europeans have given the name of Carnatic. It stretches about 500 miles along the coast, as far as Montapilly, thus stopping somewhat short of the great natural boundary of the Kistna. It is divided into two parts by the chain of Eastern Ghauts, running, like the Western, parallel to the coast. One of these divisions is called the Carnatic above, and the other the Carnatic below, the Ghauts; but the former is better known, and will be described, under the title of Mysore; and the territory on the coast will be here considered as the proper Carnatic. It is called also the coast of Coromandel; and, though in its general structure similar to Malabar, presents some marked differences. The mountains are distant from the sea fifty, seventy, or a hundred miles; and, instead of being clothed with vast and majestic woods, are in most places naked and rocky. The region is watered by several great rivers, rising in the western Ghauts, and running across the whole peninsula, among which the Cavery stands pre-eminent. Upon the whole, however, instead of numberless torrents dashing down the sides of the hills, and requiring only to be confined and guided, this tract contains large arid plains, to which the industrious husbandman can with difficulty, by canals and tanks, convey the necessary moisture. The Ghauts, also, from their great altitude, intercept the heavy rains which the monsoon brings on the western coast; and there are only occasional showers, from May to June, to fertilise the ground and cool the intensity of the heat. Hence the Carnatic, in seasons of drought, is subject to severer famines than any other part of India. Yet, though there are many barren tracts, the country, on the whole, is highly cultivated, and very productive.

The population of the Carnatic is estimated at 5,000,000; of which a peculiarly large proportion consists of native Hindoos. The tide of Mahometan conquest did not reach it before the fourteenth century; nor was the subjection nearly complete until the reign of Aurengzebe. A race of Mogul viceroys was then established at Arcot, who, on the fall of the empire, set up an independent power. Pressed, however, by the overwhelming force of the sovereigns of Mysore, they were forced to implore British aid. The Company readily interposed, and, after a long and desperate struggle, subverted the throne of Hyder and Tippoo. The Nabob, however, then found, that he was entirely at the mercy of his defenders; and his attempts to extricate himself from this dependence afforded them ground for proceeding to farther extremities. On the death of the reigning Nabob in 1801, his successor was compelled to sign a treaty by which the sovereignty of all his territories was transferred to the Company: and there was reserved to himself only from two to three lacs of pagodas, and a portion of household lands. The country was then divided into eight districts or collectorships, administered by British officers. Arcot and its immediate vicinity is chiefly peopled by Mussulmans; and on the southern part of the coast there are emigrants from Arabia, though not in nearly so great numbers as on the Malabar coast. The rest of the population is Hindoo, and the customs and religion of this native race have been preserved here in unusual purity. The pagodas are extremely numerous, and rival in splendour those of the sacred cities of Benares and Allahabad. The Brahmins, not generally oppressed, as elsewhere under Mahometan ascendency, had intrusted to them most of the civil employments in the state and revenue. Another class, almost peculiar to this district, is that of the Polygars. Originally district officers of the British government, they took advantage of its periods of weakness, and erected castles, from which, like too many of the baronial chiefs in the feudal ages, they plundered and oppressed the surrounding country. Government were often obliged to purchase their orderly behaviour by giving them an independent power and jurisdiction. There is no class whose subjection proved so expensive to Britain. The Carnatic is much more of a manufacturing country than Malabar; yet it does not produce those fine fabrics which distinguish Bengal and the Circars. Piece goods, blue cloths, chintzes, &c., all of a coarser kind, are its principal product.

Our detailed survey of the Carnatic must begin with Madras, now its capital, and that of the British possessions on the eastern coast. The choice, as in many other countries, has not been so happy as that made by the French; Pondicherry being every way a finer and more convenient station. Madras has no harbour; but a mere road, through which runs a strong current, and which is often exposed to dangerous winds. On the beach breaks so strong and continual a surf, that only a peculiar species of large light boats, the thin planks of which are sewed together with the tough grass of the country, can, by the dexterous management of the natives, be rowed across it. For the conveyance, also, of letters and messages, they employ what is called a *catamaran*, consisting merely of two planks fastened together, with which they encounter the roughest seas with wonderful address, and, when swept off by the waves, regain it by swimming. The sums, however, now invested in the

various edifices of Madras as the capital of the presidency, are so great, that to transfer the seat of government to another place would be out of the question. Fort St. George, planned by Mr. Robins, a celebrated engineer, and placed at a small distance from the sea, is a strong and handsome fortress, not nearly on so great a scale as Fort William at Calcutta, but more advantageously situated, and defensible by a smaller number of men. The public offices and storehouses form a range of handsome buildings along the beach, their upper stories being adorned by colonnades resting on arched bases. With this exception, European Madras is merely an assemblage of country houses situated in the midst of gardens, and scattered over an extent of several miles. The houses consist usually only of one story, and are of a light and elegant structure, having porticoes and verandas supported by columns covered with that fine polished composition of shell limestone called *chunam*. The diligent hand of art has covered with verdure a somewhat arid and ungrateful soil; but fruits and flowers are still raised with some difficulty. The mode of living is nearly the same as at Calcutta, but on a more limited scale. The morning, from nine to eleven, is spent in calling and visiting; at two, a substantial meal, called *tiffin*, is taken; at five, when the air becomes more cool, the family usually drive out; and at seven or eight, a late dinner concludes the day. The Black Town is extensive, and the scene which it presents, of minarets and pagodas mixed with trees and gardens, is striking from a distance; but the interior, like that of most Asiatic towns, consists of poor bamboo cottages thatched with leaves. There are, however, some great native merchants, who have splendid mansions in the Oriental style. The commerce of Madras is not so extensive as that of the other two presidencies; piece goods from the Circars and the southern Carnatic forming the only considerable article.

In the vicinity of Madras is the district of Chingleput, originally obtained as a jaghire from the Mogul, and still kept up as a distinct collectorship. Though the soil be generally dry, it is made by industry to yield tolerable crops of rice. The town of Chingleput is somewhat inland, and not of much importance. About thirty-five miles to the south of Madras is Mahabalipoor, or the city of the Great Bali, called also the Seven Pagodas. It consists of a range of sculptured edifices representing the exploits of Bali, Krishna, and other chiefs celebrated in the Mahabarat. It is sacred to Vishnu, a colossal image of whom is found in the principal temple. The monuments, though not on the same gigantic scale as in some other parts of India, are said to be very beautifully executed. In the interior of the country is Tripatti, one of the most crowded scenes of Hindoo pilgrimage; the ceremonies of which, however, Europeans, it is said, have never been admitted to view.

Proceeding southwards, we arrive at Pondicherry, the seat of French empire in India. This empire, founded in 1749 by M. Dupleix, presented for some time a brilliant aspect, and, seconded by native alliances, threatened to subvert the foundations of the British power in the East. Although the French were, however, skilful in their negotiations with the native powers, their intolerant spirit led them to refuse to the people the free exercise of their religion, which must have rendered it next to impossible for them to hold any large territorial possessions. In fact, towards the close of the war of 1756, Pondicherry fell into the hands of the British; and, though restored by subsequent treaties, never, on the renewal of war, made any effectual resistance. Pondicherry was raised by the French from a village to be the handsomest European city in India. It contained many fine houses in the European style; and the high culture of the vicinity, the numerous canals crossed by neatly constructed bridges, the roads planted with trees, and partly adorned by statues, gave to the surrounding district the appearance of a great garden. The inhabitants have suffered much by repeated hostilities, and, being unfavourably situated for trade, have been unable to retrieve their affairs. In this last respect, Pondicherry is surpassed by Cuddalore, a well-built town, at the mouth of a considerable river. In war, it has followed the fortunes of Pondicherry; though its capture in 1783 was not effected without very great loss on the part of the British.

The kingdom of Tanjore is an important territory, consisting of the delta of the Cavery, a large river, which, rising in the western Ghauts on the borders of Malabar, traverses Mysore, and falls into the sea, after a course of 400 miles. The Hindoos attach to its stream a peculiarly sacred character. At Trichinopoly, about 100 miles above the sea, it separates into two great branches, one retaining the original name, and another called Coleroon. Numerous channels derived from these convert the region into a delta, not surpassed by any part of Egypt or Bengal in culture and fertility. Art has been industriously employed to improve these natural advantages. Immense mounds have been erected, to prevent the tendency shown by the two channels at one place to reunite; and artificial canals convey to every quarter the benefits of irrigation. The chief produce consists of rice, grain, cocoanuts, and indigo, which are largely exported. The population introduced by Mogul conquest has never reached Tanjore, and the only Mahometans consist of a few refugees from Arabia. This country, therefore, has retained, almost entire, the ancient religion, constitution, and manners of India. It is particularly distinguished by the splendour of its pagodas and other edifices destined to religious worship. Tanjore was governed by an independent rajah until 1799, when the British took advantage of their ascendency to oblige him to resign the administration, accepting a revenue of a lack of rupees (10,000*l.*), with other allowances,

somewhat exceeding that amount. He was also permitted, in time of peace only, to keep possession of the strong fortresses by which his capital is defended.

The city of Tanjore may be considered as the native capital of Southern India, and the rival of Benares in learning, splendour, and antiquity. Its pagoda is greatly celebrated, rising from the ground by twelve successive stages, and considered the finest specimen of that species of structure existing in India (*fig.* 634.). A college is also attached to it. The place is six miles in circumference, and contains two large and strong forts, the smallest of which is about a mile in circumference, surrounded with a broad and deep ditch, cut in the solid rock. In one of these forts is the pagoda, and in the other the palace of the rajah, who is allowed at present to garrison both.

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Pagoda at Tanjore.

Trichinopoly is a large and strong city, farther up the Cavery, and distinguished by being the residence of Mohammed Ali and his son, who, under British auspices, reigned over the Carnatic. The siege of Trichinopoly, in 1755, is celebrated in Indian history for the gallant defence made by British officers against the French and their Indian allies, which terminated in a great part of the former being obliged to surrender. Opposite to Trichinopoly is the large island of Seringham, formed by the two branches of the river. It contains a pagoda pre-eminent in magnitude and sanctity, being about four miles in circumference, and surrounded by seven successive enclosures. The innermost shrine has never been violated by any hostile power. It is visited by crowds of penitents from all parts of Hindostan, who, in return for the pardon of their sins, bestow copious gifts; and the Brahmins attached to the temple are thus maintained in a state of luxurious ease.

Among the sea-ports by which the commerce of the kingdom of Tanjore is carried on, we may mention Negapatam, at the mouth of the Cavery, once the chief factory of the Dutch on this coast, and made by them a very strong and commercial place: but it has declined in both these respects since it came under the power of Britain, and is now chiefly used as a place of refreshment. At the mouth of one of the deltaic branches is Tranquebar, which the steady and prudent conduct of the Danish government converted from a small village to a thriving mart of trade, now containing from 15,000 to 20,000 souls. It is also the seat of a very active mission, to which the public is indebted for some important memoirs relative to India. Devicotta, at the mouth of the Coleroon, is a considerable British factory, though the approach to the fort is somewhat dangerous.

The districts of Madura, Dindigul, and Tinnevelly, added to Travancore on the opposite coast, constitute the extreme south of India. They are inferior to Tanjore in natural fertility, and still more in cultivation. They are less copiously watered, and a great part of their surface is covered with jungle, the rude retreat of Polygars, whose incursions disturbed all the pursuits of peaceful industry. It is reviving, however, under British protection. Cotton forms the staple product, particularly of Tinnevelly; and a considerable quantity of coarse manufactures is transmitted to Madras. The capitals of the same name are not of particular magnitude or importance, and in their situation and structure strength was mainly studied; but since the country has attained a more settled state, their fortifications have fallen into decay. Madura is a very ancient city, and is regarded by the Hindoos as peculiarly sacred. It has a pagoda or temple much more than commensurate to the greatness of the city, and one of the most splendid in southern India (*fig.* 635.).

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Hindoo Temple at Madura

The northern part of the Carnatic still remains to be mentioned: it is generally inferior to the southern, and yields no remarkable product, either of land or manufacture. Arcot, nearly in a direct line inland from Madras, was raised to high importance by the Mogul government, who, attracted by its superior salubrity, made it their capital. It is

situated, however, in a barren country, and surrounded by naked granite hills. Pulicat, a sea-port, after enjoying for a long time high prosperity as the chief seat of Dutch commerce on the Coromandel coast, has declined greatly since it came under the power of the British. In the most northerly quarter, Nellore, on the navigable river Pennar, and Ongole, once a strong fortress, are now chiefly distinguished by a considerable trade in salt.

The high table-land of Mysore, rising between the two coasts of southern India which have now been surveyed, is bounded on each side by the chains of the Ghauts. Its general level is about 3000 feet above the sea, and it is diversified by many hills, branching out, sometimes in clusters, from the boundary chains. This elevation, and the coolness which it maintains, render Mysore the most agreeable and healthful country of India. The western Ghauts break the force of those tremendous floods which are dashed against them from the Indian Ocean, at the same time allowing enough to pass for fertilising the territory. It is accordingly well fitted for yielding all the fruits and agricultural products of India, combined with some which belong to the southern temperate climates. The natives cultivate the territory with imperfect instruments and skill, but with considerable care, and with great attention to the means of irrigation and to the collection of manure. Rice is considered the most important object of culture, and is raised wherever a sufficient supply of water can be procured; but no attempt is made to produce two crops in the year. On the more arid grounds, raggy, a coarser grain, is cultivated for the food of the lower orders. Sugar, betel-leaf, opium, and the cocoa-nut palm, are also considerable articles. Iron ore abounds, but it is impure, and is worked by the natives in a very slovenly manner.

Mysore, at the conclusion of the last century, was a very powerful kingdom, and a most formidable enemy of Britain. Hyder, the son of a Mahometan emigrant officer from the Punjab, began by distinguishing himself in the service of the rajah, and ended by deposing him. He conquered, or rendered tributary, Canara, Calicut, and the other countries on the Malabar coast. On that of Coromandel, he had a harder struggle to maintain. By joining the French, however, he gained several important advantages; and, though repeatedly defeated in the field by Sir Eyre Coote, was always, by his superior cavalry, enabled to keep the field. At the same time he carried on with activity the internal administration; protected property, and promoted the prosperity of his subjects. His son, Tippoo Saib, inherited his courage, without any of his prudence or policy. He ruined his subjects by arbitrary exactions, and used the most intolerant means for converting to Mahometanism a people almost universally attached to the Hindoo creed. He was engaged in almost constant war with Britain; and, in the partial successes which he obtained, treated with the greatest cruelty the captives of that nation who fell into his hands. He was utterly unable, however, in the long run, to resist the mass of disciplined troops which this country brought against him. In 1792 he was completely humbled by Marquess Cornwallis, and stripped of half his dominions. In 1799, having engaged in intrigues with France, he involved himself in a war, the issue of which was still more disastrous. His capital was carried by storm, and he himself killed, fighting sword in hand. A young prince, descended from the ancient dynasty of the country, was invested with the sovereignty of part of his dominions, but allowed to reign entirely as the vassal of Britain.

Among the cities, our attention is first arrested by Seringapatam (*fig.* 636.), long the celebrated bulwark of Mysore, and the centre of its power. It is situated at the upper end

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Seringapatam.

of an island formed by the Cavery, here a large and rapid river, and is properly called Sri Ranga Patam, or the city of Sri Ranga, an appellation of Vishnu. Tippoo transferred hither the seat of government from Bangalore, the favourite residence of Hyder; but he did not display much skill either in strengthening or embellishing the place. Naked rock and dirty mud walls are the predominant features of the island; and the citadel forms an immense, unfinished, unsightly, and injudicious mass of building. The streets are narrow and confused, most of the houses mean, and even those of the chiefs not proportionate to their wealth, as Tippoo would allow no property in houses. Having no manufactures, it was almost entirely supported by the court and camp, the residence of which may have

raised the population in its days of splendour to about 150,000. It did not appear to Dr. Buchanan to exceed 32,000.

Bangalore (*fig.* 637.) was founded by Hyder, and rendered by him a place of considerable trade, consisting chiefly in the export of betel, pepper, and sandal wood. It manufactures also a considerable quantity of cloth for internal use. Neglected and oppressed, it has recovered its prosperity under the protection afforded by the reigning dynasty. The fortifications, upon Indian principles, are accounted strong, but proved inadequate to resist the attack of British troops; a circumstance which disgusted Tippoo with the place; though he was unable, as we have seen, to establish another of greater strength. Bangalore, though a royal residence, contains no trace of any splendid building, except the mahal, or palace, which, only composed of mud, displays in its halls and courts a certain spacious magnificence and superficial ornament. The accommodations, however, are in many respects imperfect and inconvenient. The gardens appear to have been laid out with very great care. They are divided into square plots, each of which, according to the Mussulman fashion, has some plant or flower allotted to it, with which it is exclusively filled. The great and difficult operation is to water these gardens; and Tippoo, in the machinery for this purpose, employed such masses of masonry as to leave nothing but holes, as it were, through which the trees grow. The vine, the cypress, even the apple and peach, have been here cultivated with success. The town of Mysore, about nine miles from Seringapatam, had been the seat of the native dynasty, but was neglected under the Mahometan sovereigns. Since their downfall, both the fort and palace have been rebuilt, and, the rajah having made it his capital, a new and increasing city has been formed around them.

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Bangalore.

The Nhilgerries, a mountain range, on the southern extremity of Mysore, comprise the most elevated tract in that region, and even in Southern India, rising, at some points, to upwards of 8000 feet. At this height, the climate becomes so temperate, that the Nhilgerries have lately been employed as a sanatory station for those whose constitutions have been impaired by the intense heats of the plains below. Here the invalid enjoys cool and refreshing breezes, with a rich and romantic scenery of hills, lakes, and waterfalls. This high region is inhabited by the Tudas, a simple and manly race of shepherds, speaking a peculiar language, and almost entire strangers to the mythology and manners of the rest of India.

SUBSECT. 5.—*Countries on the Himalayah.*

In order to complete the survey of the continent of India, we have still to contemplate the Himalayah, a region but loosely appended to it, and marked by characters essentially different from the rest. The luxuriant plains of that region are girt, along their whole northern boundary, by this belt of mountains, the most awful and inaccessible in any part of the globe. On the other side, they sink into the lofty table-land of Thibet; but as they face India, and descend by successive stages to the level of Delhi and Bengal, they exhibit every variety of climate, from the snows of the arctic circle to the burning plains of the tropic. In this descent, kingdoms lie along their sides, which, in regard both to man and nature, present a rude and northerly aspect, rather European than Indian.

Of these kingdoms, the most important is Nepal; but, for the sake of method, we shall begin with the eastern one of Boutan, or Bootan. This territory rises above Bengal, and is separated by the snowy pinnacles from Thibet, the territory of the Grand Lama. Its aspect is rugged and lofty in an almost unequalled degree, often presenting scenes the most grand and awful; hills clothed to the summit with large and lofty trees, deep and dark glens, and the tops of lofty mountains lost in the clouds. Their sides are diversified by abrupt precipices, deep dells, and cascades that often dash from an amazing height. Near its northern frontier towers the sovereign peak of Chumularee, covered with eternal snow, and seen at a great distance from the plain of Bengal, though it does not appear very lofty from the mountain table-land on which it rests. Beyond this point the traveller begins to descend, and soon enters Thibet. On the Indian side, so steep has been the acclivity, that from Ghassa, where eternal winter reigns, may be seen Punakha, where the rays of a vertical sun cannot be faced without danger. As the traveller ascends, vegetation continually changes its character. He is soon gratified with the view of European fruits, the peach, the apple, the pear, and the apricot; nor is it long before homelier plants, docks, nettles, primroses, and rosebushes, remind him of England. Strawberries, despised by the natives, spontaneously cover the fields. By-and-by the pine and fir, characteristic of northern latitudes, supplant

trees of richer foliage. At length even these disappear, and the ground shows only a few stunted shrubs and scanty herbage; but the appearance of the Thibetian peak now marks the approach to a different region. Boutan is separated from Bengal by a tract of wild and marshy forest, about twenty miles in breadth. The excess of heat and moisture here produces a rank luxuriance of wood and jungle, generating an atmosphere truly fatal to the human constitution. A British detachment, stationed here in 1772, was almost entirely cut off; and even the natives, whom habit enables to endure the climate, are a sickly, diminutive, and stunted race.

The Bouteas are an entirely different people from those of India, and bear all the characteristics of a Mongol race. They have black hair, small eyes, a broad flat triangular face. Their weapons are chiefly bows and arrows, which they dip with poison, and shoot with dexterity; but though the timid Hindoos fly before them at the first onset, in their contests with each other they do not display any remarkable prowess. Their battle, as viewed by Major Turner, was carried on by hiding themselves beneath bushes, thence occasionally starting up, making a hasty discharge, and replacing themselves under covert. Their industry struggles with most meritorious energy against the rugged surface on which it has to operate. Almost every favourable spot, coated with the smallest portion of soil, is cleared and adapted to cultivation, by being shelved into horizontal beds; not a slope or narrow slip of land remains unimproved. Many of the loftiest mountains bear on their summits and on their sides populous villages amidst orchards and other plantations. The most extravagant traits of rude nature and laborious art are everywhere presented. The irrigation of the fields is the object of peculiar attention, and water is conveyed by a very simple and useful species of aqueduct, composed of the hollowed branches of trees joined together. Considerable art is often necessary in the construction of bridges over rapid torrents and deep ravines; timber is the usual material, but occasionally iron chains are employed. Their palaces and monasteries are often handsome and spacious; but, having no chimneys, the fire, which is often required, must be made in the middle of the open room, which is soon enveloped in smoke. They are vigorous and healthy, with exception of the prevalence of the *goître*, that universal scourge of such situations. The climate imposes the necessity of a very different dress from that of India, and renders general the wearing of woollen cloth and even of furs. The people have none of the Hindoo scruples relative to animal food and spirituous liquors; but their favourite refreshment is tea, not infused, but beaten up into a mess with water, flour, salt, and butter, in a manner by no means suited to an European palate. Their religion is that of Boodh, or of the Lama, and is exactly similar to that which we shall find existing on a greater scale in Thibet.

Tassisudon, the residence of the Rajah of Boutan, is situated in a very fertile valley, or rather glen, three miles in length and surrounded by finely wooded mountains. The citadel in the centre is very lofty, the rajah residing near the top, in a palace accessible only by several lofty stairs or ladders. In this palace are accommodated 1500 gylongs, or monks of Boodh; and in its neighbourhood is a large manufactory of brass gods and religious implements. Ghassa, a western capital, is situated amid a range of mountains covered with snow. Wandipore, capital of another province, is reckoned a very strong place, and contains numerous convents of monks. Buxadewar is a strong fort, commanding the pass from Hindostan into Boutan. Moorichom, a small village on a lofty hill, is only mentioned for the beauty of its situation, and the industry displayed in the cultivation of the surrounding fields.

From the eastern frontier of Boutan westward to the Sutledge and the frontier of the Punjab stretches an expanse of varied mountain territory, which the conquests of the house of Gorkha have united into one great kingdom; but, from the theatre of the first conquest, and from the fertility and populousness of its divisions, it receives the name of Nepal. Like Boutan, it consists of a series of tracts, changing their character as they rise from the level of the British frontier on the plain of Hindostan. It is girt with a belt of wild and wooded territory, called the Tarryani, which, both from the rank excess of moisture, and from having been the theatre of frequent hostilities, has been almost abandoned by men, and has become the haunt of beasts of prey. These circumstances have, as usual, generated a pestilential air, which renders it at certain seasons destructive to any army acting within its limits. Above the plain rises a range of low hills, watered by numerous streams descending from the mountains behind, and separated by broad valleys similar to the straths of Scotland. Yet, though this district might be rendered very productive, it is greatly neglected, and is covered with an almost uninterrupted forest, composed of a vast variety of trees, among which the most valuable is a species of cinnamon, and the mimosa, out of which caoutchouc, or Indian rubber, is extracted. Above these hilly tracts towers a region decidedly mountainous, which comprises Nepal Proper, and all the most important districts of this territory. The mountains are here arranged in long steep ridges, with narrow valleys interspersed; a structure which renders travelling across them very laborious. The level even of the valleys is supposed to be 4000 feet above that of the plain of Hindostan. Where they present any extent of soil, they are exceedingly productive, the supply of water being ample,

and the temperature corresponding to that of the south of Europe. Great agricultural industry is here displayed, and the sides of the mountains are formed into terraces, by which the supply of water may be increased or diminished almost at pleasure; so that the crops are surer than in almost any other part of the world. The woods are particularly magnificent, and flowers of every form and tint cover the fields. No fruits, however, except the orange and pine-apple, come to perfection; and both here and in Boutan, vegetables are scanty and defective. Above this mountain region, towers another, called Kuchar, of more awful height, and almost inaccessible, consisting of the loftiest and most rugged steeps of the higher Himalayah. It contains immense rocks, broken into the most tremendous precipices, and shooting up into sharp pinnacles, which are either perpendicular, or covered with perpetual snow. A little scanty herbage, and occasional cultivation, is still found in the steep and narrow glens, till the highest ridge is approached, where the whole region is subject to perpetual winter. The Kuchar is about thirty or forty miles in breadth, and communicates only by tremendous defiles formed by mountain torrents, and overhung by immense precipices, with the table-land of Thibet on the other side of the mountains.

A considerable portion of mineral wealth is included in this mountain region. Copper, iron, and lead are produced in abundance, and of excellent quality. The copper, being more rare in the East than in Europe, affords a very handsome profit. Sulphur and lead are found in every part, and particularly in the Kuchar; but the former is avoided, on account of the deleterious quality of the arsenic with which it is combined; while the lead mines are rendered of little value by the impolitic system of rendering them a government monopoly. The quality of the iron is represented to be such, that weapons are produced from it without the necessity of forming it into steel. Rumour has assigned to Nepal metals which occupy a more brilliant place in the estimation of mankind; but the gold thence transmitted appears to come almost entirely from beyond the mountains, and the small quantity of silver ore existing in lead or galena cannot be extracted by the skill of the natives. The valley of Nepal does not contain even a stone; and, rather than incur the expense of transporting the excellent building materials found in the neighbouring mountains, the natives use bricks, for which clay of admirable quality is found in the country.

The population of Nepal is singularly aggregated of various classes and descriptions of people. Placed on the brink of two great divisions of the human race, the Hindoo and the Tartar, they have received successive colonies from both. The Newars, who form the basis of the population, are doubtfully traced to either class; but Dr. Hamilton, the latest and most accurate observer, regards them as decidedly Mongol, considerably altered by Hindoo mixture. These Newars are a peaceable diligent race, on whose exertions mainly depends the prosperity of the country, though they are liable to severe exactions from the military government established by the ruder tribes. The Brahmins, at a period prior to any known records, penetrated in great numbers into Nepal, where their superior knowledge soon enabled them to act a leading part. They have now absorbed most of the civil departments of the government, and effected the complete conversion of the people. In this operation, the principal difficulty consisted in persuading these hardy and hungry mountaineers to abstain from using as food the animals with which their pastures abounded. The whole nation is still suspected of a deep hankering after the flesh-pots, and every pretence is seized for an occasional trespass; but, generally speaking, the exclusion of beef as an article of diet is now complete. In every other outward observance, the Nepalese surpass the zeal of their Hindoo teachers. Colonel Kirkpatrick found almost as many temples as houses, and as many idols as inhabitants. The number of these, indeed, seems much more conspicuous than their richness or ornament. The chief shrine, that of Sumbhoonah, overlooking from a height the valley of Nepal, could only be entered by a high ladder; and, when looked into, presented rather the aspect of a poor kitchen than that of a magnificent temple. This shrine is dedicated to Boodh, and dependent on the rajah of Boutan. We are sorry to learn that no corresponding purity of life and conduct attends this extreme devotion of the inhabitants of Nepal.

This whole territory is subject to the military government of the rajahs of Gorkha, originally masters only of a small territory of that name, to the west of Nepal, among the heights of the Upper Himalayah. It was tenanted, however, by the Maygars; a bold and warlike race, who were an overmatch for the industrious people of the valleys. In 1761, Pritwi Narayan, partly by marriage and partly by conquest, obtained possession of Nepal Proper. He then employed its ample resources in extending his dominion over that large territory subject to the Chaubisi, or Twenty-four Rajahs, and other surrounding districts. The career of conquest was pursued by his successors. Sikim, the most easterly of the present Nepalese dominions, was conquered in 1788; but it was not until the commencement of the present century that the accession of Gurhwal, in which Serinagur is situated, extended the empire to its western limit beyond the Jumna. The government, however, having involved itself in war with Britain, and being completely vanquished, has been obliged to cede these western conquests. Nepal is now bounded on the west by the Kali, leaving Kemaoon, Gurhwal, and the banks of the Sutledge entirely under British protection. In the chief government,

only some institutions remain, which temper the entire despotism of the sovereign. Much regard is paid to birth, and, on occasions of great emergency, a kind of assembly of notables is held, in which men who have neither office nor connection with the government are allowed to speak their sentiments with great freedom; and, though the court is in no degree controlled by these assemblies, which are supposed by Dr. Hamilton to be employed merely as a means of allowing the discontents of the nation to evaporate, they doubtless afford an opportunity for public opinion to declare itself. The three chief ranks are the *chauterija*, or counsellor; the *karije*, or man of business; and the *sirdar*, or military commander. The individual appointed to any of these ranks holds it for life, and communicates the title to his brothers. The chauterija, who is nearest relation to the king, is officially prime minister, even though he should be only a minor; but, of course, the authority, in many such cases, must be merely nominal. In the classification of the people, however, the principal distinction is between those of pure and sacred Hindoo birth, and those who, under the brand of *Khas*, or infidel, excite in the mind of the Nepalese the idea of every thing that is impure and base. The character of the former is supported by abstinence from animal food and strong liquors, by strict cleanliness, and by a certain degree of refinement of manners. The khas, on the contrary, are distinguished by a secret partiality to the religion of the Lama, an eager longing after beef, and generally by ruder and more uninstructed habits. The reigning dynasty, however, though their own origin is dubious, have zealously adopted the Hindoo cause, and have prohibited, under the strictest penalties, all killing of cows for food; so that the hungriest of the impure tribes dare only feast on those which have died a natural death.

In treating the details of this territory, we shall begin with Sikim, the most easterly district, immediately bordering on Boutan. It is the abode of the Lapchas, "a set of vigorous barbarians, about one-half of whom have been deluded by the monkish austerities and superior learning of the Lamas." They are chiefly armed with swords and with bows, from which they shoot poisoned arrows. It was with considerable difficulty that they were subjected to the Gorkha kingdom, and compelled to renounce beef, pork, strong liquors, and sundry similar abominations, in which they delighted. Indeed, there still remains a corner, to the extreme east, which retains its independence and ancient customs. Two great rivers traverse this territory, and descend into Bengal; the Tista, on the east, supposed to come from the domain of Lassa and to cross the Snowy Mountains; and on the west the Kankayi.

West from Sikim, the Kiratas inhabit a territory of considerable extent, between the Kankayi and the great river Coosy. They are a warlike and enterprising people, and in the days of their independence could muster an army of 90,000 men. Like the Sikimites, they are much addicted to the worship of the Lama and to the eating of animal food; and though the early conquest made by the Hindoos was strenuously employed in suppressing these propensities, they were never completely put down till the late ascendency of the Gorkha dynasty. Still the Kiratas are understood to feel their changed worship and spare diet as a severe privation, and their very name sounds impure in the ears of a genuine Hindoo. The narrow valleys into which this territory is divided form a number of districts with towns of some magnitude, such as Vijaypoor, Chayanpoor, Khatang, and Dalka; but none of these plains are of great extent, nor are any of the cities of considerable magnitude.

On crossing the Coosy, we find, between two lofty ridges, the Valley of Nepal Proper, the finest and most fertile, Cashmere excepted, of any which the mountain world of India contains. The principal valley is about twenty-two miles from east to west, and twenty from north to south. Its aspect is delightful, being everywhere finely wooded, well cultivated, and surrounded by a varied amphitheatre of hills, above which tower lofty peaks of eternal snow. The entirely alluvial character of its soil strongly indicates that it was once a lake, the limits of which may almost be traced, and which is even mentioned in the early traditions of the nation. The multitude of streams, however, by which it must have been fed, now unite in that of the Gunduck, which forces a passage through the hills into the Tarryani, and ultimately reaches the Ganges. The inhabitants of the valley are chiefly the Newars, already described, and the Parbatiyas or mountaineers, few of whom can be induced to take up their abode in the cities. The chief of these are Khatmandu, or Catmandoo, the present capital, Zalita Patan, and Bhatgang. The number of houses has been stated at 18,000 in the first, 24,000 in the second, and 12,000 in the third; but Dr. Hamilton does not conceive that the whole number of people can exceed these numbers, unless it be to a small extent in Catmandoo.* These towns are neatly built with brick, and the palaces, though possessing no high architectural character, are yet more spacious than could be expected from the narrow territories of the princes by whom they were erected. Colonel Kirkpatrick, on conjectural data, in which Dr. Hamilton seems to acquiesce, estimates the entire population of the valley at about 500,000.

The river Trisul Ganga separates Nepal Proper from the country of the Chaubisi, or the Twenty-four Rajahs; an extensive territory, traversed from west to east by the great river

* [In the spring of 1834, 10,000 houses were destroyed in Catmandoo and its vicinity, by an earthquake.]

Gunduck, which appears to rise from beyond the Himalayah. These rajahs occupied each his own little valley, under a sort of feudal dependence on the chief of Yumila, once the most powerful of northern India. These states, however, are chiefly distinguished as containing among their number the original seat of the Gorkhali dynasty, who now hold undisputed empire over all these mountains. Gorkha is a valley much inferior in extent to Nepal, but with a warmer climate, and a soil of considerable fertility. The cultivators consist of Brahmins, but the fighting race are the Maygars. Pritwi Narayan introduced the use of matchlocks, which, though neither good nor well managed, gave his troops a great superiority over the other mountaineers, who had no weapons but the sword and the arrow. Although the dynasty have now settled in the rich valley of Nepal, their followers still pride themselves in the title of Gorkhalis. Gorkha, the capital, is a considerable town of 2000 houses. Previous to the entire ascendency of this dynasty, the rajahs of Palpa were considered the most powerful of the twenty-four, and were at the head of a numerous confederacy.

West from the Chaubisi occurs another cluster of twenty-two, called the Baisi Rajahs. Of these, previous to the Gorkha conquest, by far the most distinguished was Yumila, forming the most northerly district, and extending along the foot of the highest mountains. It contains a valley almost equal in extent to that of Nepal, overtopped on all sides with snowy peaks, but fertile in grain, though not suited to rice or the sugar-cane. It supplies, however, the neighbouring countries with salt, from a place called Mukhola. The capital is Chinachin, which has not been visited by any European; but is described as a large straggling town. The chief of Yumila is a Rajpoot, and was long acknowledged as supreme lord over all the mountain chiefs towards the west. His power, however, was not quite equal to that exercised by the emperors of Germany over the members of that confederacy. Each chief sent him an annual embassy with presents; he bestowed the mark of royalty on each heir, at his succession; and he had a right to interpose in keeping the stronger from overpowering the weaker. The reigning chief, however, had not the foresight to interpose in defending any of his neighbours against the spreading power of Gorkha, but allowed it to increase, till it eventually overwhelmed himself.

The western boundary of Yumila and of the Baisi Rajahs is formed by the Kali, which is considered as dividing the mountain territory of India into two great portions, and which, since the last treaty, forms the western boundary of the Nepal dominions. On crossing to its western side, we enter the region of Hindoo purity, where the veneration for the Lama and the hankering after beef, for which the eastern tribes are regarded with such disgust and horror by every pure worshipper, no longer prevail.

The first district, Kemaoon, or Kuman, though mountainous, is covered with fine verdure and extensive forests, and in many places yields large crops of summer rice. The inhabitants consist chiefly of Rajpoots, with a mixture of Sudras and Brahmins; the impure races having been either expelled or converted. In consequence of the last war, it is now subject to Britain. Almora, the capital, is a town of 1000 houses, irregularly scattered over the top of a high ridge of mountains, and carries on a considerable trade.

To the west of Kemaoon is the territory now called Gurhwal, but much better known under that of Serinagur. It is in an especial sense the holy land of the Himalayah, containing the source of the Ganges, and five *prayagas*, or junctions of its tributary streams. Thence it derives sufficient claims, according to Indian ideas, to be considered as a place of the loftiest sanctity. Indeed, the awful scene which it everywhere presents, of rugged rocks, deep glens, and mountain rising over mountain, could not fail to excite the deepest emotions in the pilgrims by whom it was visited. Serinagur presents none of those deep and fertile valleys which enable the countries to the east to support a large population. The places capable of culture consist almost solely of small ridges, or table-lands, at the top of the mountains. The roads are often cut along the sides of high perpendicular rocks, and the torrents are passed by bridges of rope stretched across. On the largest of these table-lands, about a mile and a half square, Serinagur is built, from the mere impossibility, it would seem, of finding another spot which would afford sufficient space. Various vicissitudes, however, and particularly the invasion of the Gorkhalis, and the system of misrule which they established, entirely deprived Serinagur of the slender measure of prosperity which it ever enjoyed, and it is now a scene of extreme poverty. It is still, however, a considerable thoroughfare for those devoted pilgrims who, after frequenting the fair of Hurdwar, venture to visit the thrice-sacred spot where the infant Ganges descends from the snowy steeps of Himalayah. The journey is attended with great difficulty and peril, and a considerable number perish on the road. The first town above Serinagur is Josimath, the winter residence of the high-priest of the Ganges, which contains numerous temples. It lies on the Alacananda, one of the two branches which concur to form the Ganges. On tracing it upwards, is found Manah, a village containing 14,000 or 15,000 inhabitants; the chief practicable entrance into which is across the mountain passes by this place. On the opposite side of the river is Bhadrinath, the seat of that famed sanctuary which is frequented by crowds of Hindoo pilgrims. It is built in the form of a cone, roofed with copper, and

having a spire surmounted with a golden ball at the top. Only an imperfect view is allowed of the inner sanctuary, in which is seated the image of Bhadrinath, a figure of black stone, about three feet high, covered with a rich drapery of gold and silver brocade. A silver salver is handed round to receive the offerings, which are expected to be liberal. There are also several cold and hot springs, each of which has a sanctifying virtue, to be purchased by the penitent with a portion of his earthly goods. Such transactions would render these shrines very rich, were it not that the chiefs, in their extreme need, have often eyed them as a source of pecuniary relief; and though the sanctity of the place may prevent them from absolute plunder, yet, by borrowing or exchange, of which they can dictate the terms, they have dissipated a large portion of these holy treasures.

About thirty miles west from Bhadrinath is Gangoutri, a village near the head of the Bhagirati, considered the main and proper head of the Ganges. A few miles above, it is seen flowing with a moderate current, fifteen or twenty yards broad, and about waist-deep. Higher up, it flows beneath beds of snow, so deep that even its sound is not heard. At length is perceived a wall of rock, from an angle of which, called by the Hindoos the Cow's Mouth, on account of its rude resemblance to that orifice, issues the Ganges. "Nothing," according to Mr. Fraser, "can surpass the grandeur of the scene which is here presented. The bare and peaked cliffs shoot to the skies; their ruins lie in wild chaotic masses at their feet, and scantier wood imperfectly relieves their nakedness; even the dark pine more rarely roots itself in the deep chasms which time has worn. Thus on all sides is the prospect closed, except in front to the eastward, where, from a mass of bare spires, four huge, lofty, snowy peaks arise: these are the peaks of Roodroo Himalayah. There could be no finer finishing, no grander close, to such a scene."

At a small distance, and from the same stupendous ridge which contains the source of the greatest river of India, is found that of its main tributary, the Jumna. The glen near Bunderpooch, through which its infant course passes, is described to be rugged and gloomy beyond description. "It looks like the ruins of nature, and appears," as it is said to be "impracticable and impenetrable. Little is to be seen, except dark rock; wood only fringes the lower parts and the water's edge; perhaps, the spots and streaks of snow, contrasting with the general blackness of the scene, heighten the appearance of desolation. No living thing is seen; no motion but that of the waters; no sound but their roar."

The territory of Sirmore, and that of the Twelve Lordships, extending along the Sutledge, subject to a number of independent rajahs till over-run by the Gorkhas, have now been restored to those chiefs under the protection of Britain. The valley of the Sutledge presents little cultivation: the mountains are brown, barren, steep, and rocky; the bed of the river narrow and arid. In the territory of Joobul, however, the mountains are covered with the most magnificent forests; pines, hollies, oaks, sycamore, and yew, of the most varied forms, and often of gigantic size. The cultivation is very great, and the perpendicular sides of the mountains have been most laboriously fitted for it; so that districts naturally barren are even enabled to export grain. The inhabitants appeared to Mr. Fraser every way superior in external accommodation to the Scotch highlanders; but their character was by no means regarded in so favourable a light, combining the rude habits and violent feuds of a barbarous race with the cringing and abject spirit of an Asiatic despotism. West from the Sutledge, the territory along the head of the Punjab is occupied by a number of independent rajahs, engaged in frequent hostilities with each other. Among the principal are Bischur, Sirmore, Joobul, Kahlare, Hindoor. These territories occupy the deep mountain valleys of the Sutledge, overhung by brown heathy steeps, of the Tonse, and of the Pahur, which flows through a more smiling valley. The capitals are small towns, built often in stages on the steep sides of rocky mountains. Such is the situation of Rampoor, capital of Bischur, on a high bank above the Sutledge. Nahn, the capital of Sirmore, occupies so rugged a steep, that its streets consist of steps cut in the rock. Notwithstanding the barrenness of the surrounding country, the commerce with Thibet and Tartary enables these mountain capitals to attain some little wealth and importance.

After scaling the mighty boundary wall of western India, the traveller looks down on its northern side into Cashmere, an extended valley, which nature has lavishly adorned with all the attributes of a terrestrial paradise. It is enclosed on every side within tremendous steeps, which separate it, to the north from Thibet, and to the west from Cabul and Candahar. Numberless rivulets, descending from these heights, diffuse on all sides verdure and fertility, and render the whole country, as it were, an evergreen garden. Rice, wheat, barley; the grain and the fruits both of the tropical and temperate climates, are produced in equal abundance and perfection. The plane tree nowhere spreads such a pomp of foliage. But the peculiar boast of Cashmere is its rose, a favourite theme of Eastern poetry, whose tints and perfume are said to be alike unrivalled. The numerous streams unite in the Jelum, which, after forming several small lakes, rolls westward, forces the mountain barrier, and finally joins the Chenab.

The Cashmerians are a Hindoo race, differing in several respects from those by whom they are surrounded. They are active, industrious, and, at the same time, witty and inge-

nious, with a taste for poetry and the sciences. On the other hand they are represented as volatile, treacherous, extravagantly addicted to pleasure, rapacious in acquiring money, lavish in spending it. The beauty of the females is much famed in the Eastern world, and seemingly not without reason, though greatly enhanced by contrast with the dark complexions of India, and the deformed visages of the Tartar races. A sad reverse has befallen their country since the time when it was the favourite residence of the Mogul, who, viewing it as the paradise of the Indies, repaired thither whenever he wished an interval of recreation, and bestowed his cares and wealth in lavishly adorning it. On the fall of that power, Cashmere was subdued by the Afghans, and placed under the rule of governors who have cruelly tyrannised over it, and stripped it of a large portion of its former prosperity. Since their kingdom was broken up, this country has been disputed between one of the branches of its royal family, and Runjeet Sing, in whose power it now is. The revenue is reckoned at 500,000*l*.

The Cashmerians are a manufacturing nation. They work skilfully in wood, make the best paper in the East, and excel in cutlery and lackered ware. But the grand branch of industry consists in their shawls, from the wool of the goat of Thibet, which are in general request all over the world. The natives complain that the tyranny of the Afghans has made deep inroads on this branch of industry, and has reduced the number of looms from 40,000 to 16,000. This work seems to be conducted upon a more extended scale than is usual in India, one merchant often employing a great number of looms. Three men work at each loom; and a year is sometimes spent in making a single shawl. In the best and most elaborate kinds, it is considered enough if they execute an inch and a half in the day. Of course, the ordinary shawls are made with much greater expedition.

The city of Cashmere, called anciently Serinagur, is the largest in the Afghan dominions, containing from 150,000 to 200,000 people. It extends three miles along the banks of the Jelum, in a situation, the beauty of which has been widely celebrated, particularly its lake, studded with numberless islands, green with gardens and groves, and having its banks environed with villas and ornamented grounds.

SUBSECT. 6.—*Ceylon.*

Ceylon, an extensive, somewhat wild, but beautiful island, forms a close appendage to India, lying to the east of its southern extremity, whence it is separated by the Straits of Manaar. It is nearly 300 miles in length, and 160 in its greatest breadth. The territory, along the western coast, is occupied by a somewhat extensive plain; beyond which, ranges, first of hills, and then of mountains, rise successively behind each other, and with their rugged surface cover a great extent of the island. They do not, however, rise to any very lofty height; since Adam's Peak (the most elevated) is only 6152 feet above the sea. These steeps are generally covered with extensive forests and dense underwood, which give to a great part of the island the character of jungle.

The history of Ceylon is scarcely at all known previous to the arrival of the Portuguese in 1505, at which time they found the native sovereign defending himself with difficulty against the attack of the Arabs. They at first merely exacted a tribute, but soon engaged in a series of warfare, which ended in driving the natives from Colombo and most of the other stations on the coast, and obliging them to take refuge in the interior. They settled in considerable numbers; and a pretty large body of their posterity, mingled with the natives, still survive. Ceylon, however, shared the lot of their other Indian possessions; and, in the course of the seventeenth century, after a series of bloody struggles, was wrested from them by the Dutch. It remained in their possession, with the exception of a short occupation of Trincomalee by the British in 1782, till 1796, when an English expedition entirely subdued it; and by the peace of Amiens it was finally ceded to that power. In 1815 the British beat the king of Candy, occupied his capital in the mountainous interior of the country, and thus became entire masters of this fine island. It has been made a royal colony, not subject to the rule of the East India Company.

The produce and wealth of Ceylon are not in proportion to its natural capacities. Much of its surface, indeed, is mountainous and craggy; and there are large sandy tracts along the coast. Rice, though almost the only object of native culture, is not raised in sufficient quantity for the support of the inhabitants. The most peculiar product is cinnamon, one of the most delicate of spices, and for which there exists an extensive demand in Europe. It is a species of laurel, from four to ten feet high, with numerous branches, and with a light porous wood. It grows spontaneously over a great part of the island; but that reared in gardens in the vicinity of Colombo is considered the best. The bark, which is the valuable part, is taken off when the plant is three years old, and requires no preparation except being spread out to dry. The cocoa-nut tree is also in great abundance; and its fruit, as well as coir, a species of rope manufactured from its husk, are staple exports. A great quantity of arrack is distilled from its juice. Animals, chiefly wild, are abundant; but the only valuable one is the elephant, which, in Ceylon, is considered of better quality than in any other country in the world: it is not, indeed, so tall as on the Continent, but peculiarly active,

hardy, and docile. No elephants are reared in a tame state; but they are easily caught in pits prepared for the purpose, and are tamed in eight or ten days. An uncommon variety of precious minerals are found in Ceylon; the ruby, the amethyst, the topaz, and even the diamond: but none of them are of fine quality. There are mines of lead, iron, tin, and quicksilver; but little wrought. A very extensive pearl fishery is carried on in the Straits of Manaar, about fifteen miles from the shore; but chiefly by boats from the coast of India. In 1804 it was leased for 120,000*l.*; but since that time it has declined; and in 1828 its amount was only 30,612*l.* A species of conch-shells called chanks, much used by the Hindoos for rings and other ornaments, is fished in the straits of Manaar. Mr. M'Culloch gives the value of the exports in 1825, at—Cinnamon, 114,418*l.*; arrack, 21,500*l.*; coir, 10,000*l.*; cocoa-nuts, 7561*l.*; chank shells, 8219*l.*; timber, 12,100*l.*; jaggery, 4,946*l.*; coffee, 13,883*l.* The trade has been much fettered by impolitic restrictions, both the produce and sale of cinnamon being made a monopoly of the government; but a more liberal system has recently been adopted.

The population of Ceylon was estimated at about a million and a half, till, in 1814, a census of all the part of it then in possession of Britain gave only 496,000; and another, in 1825, of the whole island, exhibited only 754,000. These enumerations were probably somewhat defective, and the numbers are supposed to have since increased, and to amount now to about 900,000. The natives, called Cingalese, appear to partake of the character of those of Hindostan, Birmah, Siam, and the Oriental islands, with all of whom they hold intercourse. They are a fine and handsome race, and in their manners polished and courteous; but they are indolent, and very little advanced in the arts and sciences. As in all countries bordering on India, the religion of Boodh is established. The Siamese are even said to look to Ceylon as the quarter from which they received that faith; but this sacred character is probably an illusion derived from distance and mystery. It is remarkable that, here, as in Thibet and some other Boodhist countries, the unnatural custom of the plurality of husbands prevails; and it is said to be accompanied, to a certain extent, with the crime of infanticide. The rugged jungly tracts of the interior are inhabited by a savage race called the Beddahs, who subsist by hunting, and sleep under trees, which they climb like monkeys: some of them, however, are employed in exchanging ivory, honey, and wax, for cloth, iron, and knives. The Portuguese and Dutch inhabitants retain their European customs, considerably modified by the adoption of those of the natives. No such modification has taken place in the case of the English, who consist chiefly of king's troops stationed at the chief towns.

Of the towns and sea-ports of Ceylon, Colombo, on the west coast, is the seat both of government and of almost all the foreign trade. It owes this advantage to its situation in the midst of the most fertile and productive territory in the island. Its accommodation for shipping consists merely of a roadstead, tenable only during four months of the year. The place is well built, with broad and regular streets, and contains about 50,000 inhabitants, who include an uncommon variety of Asiatic races. The fort is spacious, surrounded with a broad and deep ditch. Trincomalee, on the north-east, is situated amid a mountain territory that is singularly grand and beautiful, but very unfruitful. It has, however, the advantage of containing the finest harbour in those seas. The value of this is greatly heightened by there not being, on the whole coast of Coromandel, a safe roadstead; so that all vessels driven from their stations on that coast seek shelter at Trincomalee. The town, however, being supported only by this resort, is small and poor; though the late establishment of a naval arsenal promises to give it greater importance. Point de Galle, at the southern extremity, has a spacious and generally secure harbour, in a beautiful and healthy situation. The native population is numerous; but there are few European settlers. At Bellegam, in the vicinity, is a large temple of Boodh, with a colossal statue of that divinity. Candy, the interior capital, is only a large straggling village, surrounded by wooded hills that echo continually with the cries of birds and wild animals. It contains an extensive though not lofty palace of the king, and several Boodhist temples painted with gaudy colours. The British government has constructed an excellent road to this place from the coast.

CHAPTER VII.

FURTHER INDIA, OR INDIA BEYOND THE GANGES.

Further India comprises that extensive region situated between India and China, and sometimes, with but little propriety, called Indo-China, as the inhabitants have nothing in common with the Hindoos or the Chinese. This region has had little share in the great transactions of which Asia has been the theatre; yet it comprises a number of extensive and important kingdoms, some of which have been alternately united and separated; Ava, Arracan, Pegu, Siam, Cochin-China, Cambodia, Tsiompa, Laos, and Tonquin.

References to the Map of Further India.

1. Zemee
2. Monglier
3. Kiaintoun
4. Chiboo
5. Labenagoo
6. Tagoung
7. Quantong
8. Bampoo
9. Moguang
10. Paienduasen
11. Luckhumry
12. Cougong
13. Conickpoor
14. Munnypoor
15. Tummezoo
16. Pansha
17. Birma
18. Malac
19. Keoummeeoun
20. Mouchaboo
21. Ummerapoora
22. Ava
23. Chagaing
24. Maydoob
25. Moowah
26. Sendaht
27. Sekaygahdo
28. Neday
29. Pagahm Mew
30. Lawnyeoaeh
31. Arracan
32. Waymazoop
33. Taynangheou
34. Meulah
35. Laypadoh
36. Meembah
37. Meeaday
38. Tongho
39. Peeaye Mew
40. Podangmew
41. Tzeezan
42. Yeagaun
43. Tombay
44. Zaloom
45. Pegu
46. Yangain
47. Denoobew
48. Persaim
49. Coamin
50. Maro
51. Chinabuckeer
52. Rangoon
53. Syriam
54. Martaban
55. Yemylo
56. Keintabbien
57. Three Pagodas
58. Tavoy
59. Mergui
60. Tenasserim
61. Bardia
62. Cin
63. Cham
64. Bankok
65. Siam
66. Pakenham
67. Chantibond
68. Manscape
69. Aiheee
70. Pontiamo
71. Camoa
72. Basac
73. Saigong
74. Balbamont
75. Ponomping
76. Cambodia
77. Sombok
78. Sombokbut
79. Boatiang
80. Columpi
81. Nhiatrang
82. Phuyen
83. Yuan Dal
84. Quinhone
85. Toanhoa
86. Sandepora
87. Melaung
88. Kehoa
89. Konke
90. Tarkoan
91. Kianroungeia
92. Domea
93. Kikeu
94. Kesbo
95. Bodego
96. Kemoak
97. Foikey
98. Donho
99. Kaza
100. Kesnoe
101. Shinten
102. Ketos.

Rivers.

a Keendoen
b Irawaddy
c Panlaung
d Paunlaun
e Sittong
f Moutama
g Mobia
h Thaulnaya
i Maygue
j Meinam
k Chantibond
l Oubequame
m Cambodia
n Maykaung
o Hoti Kien.

Sect. I.—*General Outline and Aspect.*

Further India consists of an extensive maritime territory, throwing out wide peninsular tracts into the Indian sea; separated by various seas, straits, and sounds from its large islands. From Hindostan, on the west, it is divided by the Bay of Bengal; while, on the north, a range of imperfectly known boundaries, chiefly of a mountainous character, separates it from China and Thibet. The main body of this territory may be described as situated between 9° and 25° of north latitude, 92° and 109° of east longitude; but these limits do not include the long peninsula of Malaya, which stretches southward to within less than two degrees of the equator. We shall thus have a square space of nearly 1000 miles in each direction, and containing probably about 900,000 square miles.

The surface of this great territory, according to the general view taken by Captain Low, is formed by a series of mountain ranges running from north to south, and forming branches from the mighty chain of Himalayah, which crosses Asia from west to east. Between each of these ranges intervenes a broad valley, in general of extreme fertility, and watered by a large river descending from the mountain frontier of China and Thibet. These valleys either form, or have formed, separate kingdoms; and, though conquest occasionally unites several under one head, the boundary of hill and jungle within which each is enclosed affords to it, usually at no very distant period, an opportunity of shaking off the yoke. The mountains have hitherto been very little observed, being covered with extensive forests entangled with thick underwood, and filled with wild beasts. Those which form the northern frontier of Assam are exceedingly lofty, falling little short of the Himalayah, of which they are a continuation. Elsewhere they do not appear to be of the first rank in point of elevation: Mr. Crawford conceives that the highest of the central range which borders on Siam does not exceed 5000 feet. The rivers are of greater importance. The Menam, which waters Siam, and is called by the natives the mother of waters, appears to rise among the mountains of Yunan. To the twentieth degree of latitude it is navigable only for canoes: but, on reaching Yuthia, the old capital, it becomes a noble and navigable stream; and, after a course of about 800 miles, enters the Gulf of Siam by three channels, the most easterly admitting vessels of the first magnitude. The Irawaddy, or river of Ava, appears a stream of nearly equal importance, and is navigable several hundred miles for large boats. Its upper course is still involved in mystery; and M. Klaproth has recently discovered some grounds for believing that it is identical with the Sanpoo, or river of Thibet, hitherto regarded as the head of the Brahmapoutra. The Mekon, Maykaung, or Donnai, in Cambodia, is also a noble river, which passes through Yunan, and is navigable in 22° or 23° north latitude, twenty days' sail above its mouth. The other rivers are numerous, and many of them fall into the sea; but a greater number are tributaries to the three main trunks already mentioned. The country is broken by several large bays, particularly those of Siam, Martaban, and Turon; but it contains no lakes of any importance.

Sect. II.—*Natural Geography.*

There are no materials on which we can attempt a botanical or geological delineation of this territory.

The Zoology also of these immense and luxuriant regions is scarcely known; we can therefore merely notice a few of those extraordinary animals which appear natives of these unexplored countries.

The Quadrupeds more peculiar to Malacca are the following:—

Simia Satyrus. The Orang Outang.
Hylobates Lar. Large Gibbon.
Hylobates variegatus. Little Gibbon.
Hylobates leuciscus. Silvery Gibbon.
Cervus malaccensis. Malacca Stag.

The manners of the Orang Outang (or more properly Orang Utan) (*fig.* 639.), so well known for its remote resemblance to the human form, long remained enveloped in fable, until given by Dr. Abel, who brought a living one to England, and who had seen many others. The fables of early voyagers, and of some later naturalists, of this gigantic ape walking erect, waging war with clubs, &c., are now exploded. The height of the adult animal is uncertain; those brought to Europe, being young, have not exceeded three or four French feet; the great toes have but one joint, and no nail. The hair is reddish brown, but there is none on the face, or on the palms of the hands and feet. It is perfectly incapable, says Dr. Abel, of walking in an erect posture: this is betrayed in his whole external conformation, which is precisely that adapted for climbing trees and living among the branches. The Orang Outang has none of the grimaces and antics of other monkeys, nor does it possess their proneness to mischief. Gravity, approaching to melancholy, and mildness, are often expressed in its countenance, and seem to be its natural disposi-

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Orang Outang.

tion. The specimen is question was mild under injuries, and soon became strongly attached to those who treated him kindly. M. Cuvier has been induced to think that the Orang Outang is no other than the young of the Pongo, a much larger ape, inhabiting the interior of Borneo. Dr. Harewood, however, has recently adduced very strong arguments to show that the Pongo is a distinct species.

The Gibbon Apes are distinguished from all others by the enormous length of the arms, or more properly the fore-feet; these nearly touching the ground when the animal is placed erect. The species most generally known is the Black-handed Gibbon (*Hylobates Lar.* Ill.); its size is much inferior to that of the Orang Outang, as the largest specimens do not exceed four feet. The disposition of these apes is naturally gentle, gay, and even frolicsome, and they receive their food, in confinement, without greediness or impatience.

The few Birds that have been brought from Malacca are splendid and curious; but it is impossible to conjecture how many others, unknown even by name, lie hidden from the naturalist in the vast and unexplored forests. Malacca seems to abound with snow-white Cockatoos, splendid red Lories, and many-coloured Parrots and Parrakeets. It is in this peninsula that the gigantic Argus Pheasant, and the Cryptonyx, two of the most striking gallinaceous birds of Asia, are found.

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Crowned Pheasant.

The gigantic Argus Pheasant is more than six feet and a half long; the two middle tail feathers alone being nearly four feet, elegantly marked by numerous snow-white dots, on a chestnut ground: the whole plumage is variegated with spots resembling eyes, and the quill feathers are blue. In its wild state, it has a great antipathy to light, being very dull during the day, but active as night approaches. It is found also in Sumatra; but is so difficult to be kept alive, that it seldom survives in captivity more than a month: hence this beautiful bird has never been brought to Europe but as skins.

The Crowned Pheasant (*Cryptonyx coronatus* T.) (*fig.* 640.) is a much smaller bird, but equally difficult to rear. It inhabits the deep forests both of Malacca and Java, and is distinguished by an erect chestnut crest of feathers, having their webs disunited.

SECT. III.—*Historical Geography.*

The knowledge of the ancients respecting this extremity of Asia, was neither extensive nor accurate, and scarcely reached the shores east of the Ganges. There, indeed, Ptolemy exhibits the Golden Chersonese, the Great Bay, the coast of Sinæ, and the city of Thinæ; features which are found by Gosselin in the mouths of the Irawaddy, the Gulf of Martaban, the coast and city of Tenasserim. Others, however, suppose the Sinæ to be the Chinese, and infer that the knowledge of the Romans reached to the coasts of that celebrated empire. It is at all events certain that the ideas of the ancients respecting all this range of coast were extremely confused and imperfect.

The information also of the moderns respecting this portion of Asia was long extremely defective. Marco Polo and Oderic of Portenau were the first who gave some vague ideas respecting it. The Portuguese, amid their wide career of conquest and settlement, did not attempt to comprehend any portion of it except the detached peninsula of Malacca, on which they formed a settlement. The French, however, sent to Siam a mission, partly religious and partly political, and through which Loubere obtained some important information respecting that great monarchy. But it is by their political relations with British India that these countries have become, though still imperfectly, somewhat better known in Europe.

Ava, or the Birman empire, has been subject to the most remarkable revolutions of any of these kingdoms. It comprised three that are naturally and originally independent,—Ava, or Burma, Arracan, and Pegu; but each struggling for, and alternately gaining, the ascendency. Pegu, at the first arrival of the Portuguese, was found the ruling state, and its court displayed considerable pomp. About the middle of the sixteenth century, the Birmans rebelled against this authority, and not only established their own independence, but subdued their former masters. This supremacy continued till about the middle of the eighteenth century, when the Peguese, having obtained arms and officers from the Dutch and Portuguese, turned them against the Birmans, gained successive victories, and finally reduced the capital, making prisoner Dweepdee, the last of a long line of Birman kings. A reaction, however, in no long time arose among this naturally brave and energetic people. Alompra, a man of humble birth, collected a band of his countrymen, and carried on for some time a desultory and guerrilla warfare. His forces gradually increasing, he suddenly attacked and took Ava, and succeeded in raising a general insurrection against the king of Pegu. A powerful army sent by that prince was totally defeated; and Alompra, following up his success, invaded Pegu, and gained a series of victories which made him master of the capital, and

extinguished the Tallieu or Pegu dynasty. His successor, Shemburen, subdued a revolt of this nation, defeated the Chinese in a great battle, and gained possession of Siam, but was unable to retain any part of that monarchy, except the provinces of Mergui and Tenasserim, on the western coast of Malacca. His brother, Minderagee Praw, who afterwards ascended the throne, succeeded in annexing Arracan to the empire. The Birman dominion thus became extremely powerful, as, besides these three great kingdoms, its influence was established over the territories of Cachar, Cassay, and others bordering on Bengal, through which it came in contact with the British territory. Two proud and powerful states were not likely to be long in proximity without some collision. A series of misunderstandings at length produced open rupture; and all the disposable force of British India was in 1826 embarked for the invasion of the Birman empire. The court of Ava, long accustomed to vanquish and domineer over all its neighbours, could not be induced to view with apprehension one which had not even a royal name at its head. A very short conflict was necessary to impress on them the superiority of the British arms: yet sickness, the natural obstacles of the country, and the difficulty of transporting provisions and stores, long paralysed the active efforts of the invaders; but when at last they began to move upon the capital, all efforts to prevent their advance were completely baffled; and the Birman government, after repeated defeats, seeing no chance of preserving the seat of government from foreign occupation, signed a humiliating treaty, paying a large sum for the expenses of the war, and ceding the important acquisitions of Arracan, Mergui, Tavoy, and Tenasserim, which are now comprehended within the wide limits of the British Indian empire.

Siam, consisting of a single great valley at the head of a wide gulf, and enclosed by two ranges of mountains, which, if not very lofty, are steep and encumbered, has maintained a more stable character than any other of this cluster of kingdoms. It was indeed subdued by the Birmans in the height of their power; but on this, as on other occasions, the strong national feeling of the Siamese impelled them to rise on the invader, who, entangled in difficult passes, and attacked by contagious diseases, was ultimately obliged to quit his hold of the country.

Cochin-China, Cambodia, and Tonquin form three great countries to the east of Siam, to which those of Laos and Tsiompa may almost rank as mere appendages. Of these countries, little more than the name was known to Europe until about half a century ago, when they were brought into notice by an interesting revolution. In 1774, Caung Shung, the young king of Cochin-China, was dethroned and driven from his capital by a triumvirate of usurpers, who assumed the supreme sway. The prince took refuge in a desert island, where he lived for several years in the utmost distress. But Adran, a French missionary, who had aided him in effecting his escape, continued to support his cause, and spared no efforts to replace the young monarch on the throne of his ancestors. He even went over to solicit assistance in France; but the disturbed state of that country, in consequence of the revolution, prevented him from meeting with much success. Yet he procured some aid in arms and officers for Caung Shung, who, having landed in 1790 on the continent, was welcomed by his subjects, and by their aid soon replaced on the throne. The circumstances under which his restoration had been achieved led him to form a strong attachment to Europeans, and a desire to introduce those improvements, especially in the military art, by which they were so much distinguished above his own subjects. Having organized a standing army tolerably armed, and disciplined in the European manner, and a fleet of three hundred gun-boats, with a frigate, he acquired a force with which no power in this part of Asia could cope. He was thus enabled to conquer first Tonquin, a kingdom greater and more populous than his own, and afterwards Cambodia, and thus to become master of all that great range of territory which extends between the gulfs of Siam and Tonquin.

Sect. IV.—*Political Geography.*

The government of all these kingdoms is of the same simple structure as that of Eastern countries in general. In principle, at least, it is a pure despotism; in which no constitutional check on the authority of the monarch is recognised. The state officers, called in Ava woongees, woondosks, and attawoons, compose a sort of council of state, but entirely subject to the monarch, and removable at his pleasure. The great lords hold certain portions of land or fiefs, in virtue of which they are bound to the performance of military service. They occupy these only as grants from the crown, resumable at pleasure, and which are judged to cease and to require renewal at the accession of each monarch; but, in fact, unless upon signal ground of displeasure, it is not customary to remove them. The nobles, especially in Siam, show the most profound submission, and approach the throne in the most abject manner, lying prostrate on their faces, and creeping on the ground. The king has many pompous titles, but that of shoe, or golden, is the one most valued, and which must be applied to him on every occasion:—"a sound has reached the golden ears; a suitor

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King of Cochin-China.

has arrived at the golden feet; a smell has saluted the golden nostrils." The king appears in public only on state occasions, surrounded by his nobles, in a sitting posture. The costume of the king of Cochin-China (*fig.* 641.) is very peculiar and extremely splendid.

The laws of these kingdoms are chiefly borrowed from Hindostan and China: they are well combined, executed with strictness, and a rigid police is maintained. The Birman laws are of Hindoo origin, and are supposed to have been transmitted from Ceylon by way of Arracan. The code is called the Derma Sastra, and is one of the many commentaries on Menu: it is replete with sound morality, and inculcates severe and salutary lessons, even to the monarch, on the high duties of his station. With the exception of trial by ordeal and imprecation, which is admitted by the superstitious ideas of the East, it is the most judicious and practical of all the Hindoo systems. Civil cases are first tried in the courts of the maywoons or viceroys, from which lies an appeal, though an expensive one, to the lotoo, or supreme tribunal, composed of the council of state, which reports upon them to the king. Thus, however, the judicial power is entirely under the control of the executive, and all offences which are supposed to affect the safety or prerogative of the sovereign are punished with disproportionate rigour. In Cochin-China all the branches of administration are executed by mandarins of different classes, according to the Chinese model; but the political system is by no means reduced to the same regular form as in that great empire.

The military strength of these kingdoms consists almost entirely of a feudal militia, for which all males of a certain age are enrolled, and may be called upon to serve under the chiefs of their respective districts. Their arms are mostly swords, lances, and cross-bows; though they have collected a considerable number of fire-arms; but these, being chiefly the muskets condemned in the English arsenals, cannot, by the most anxious exertions of art and skill, be brought into a serviceable state. The only exception is in Cochin-China, where the European officers in the king's service have effected considerable improvements. But the most efficient part of the establishment consists in the war-boats, destined to act on the great rivers which form the main channels of communication in all these kingdoms. Those of the Birmans are constructed out of the solid trunk of the teak tree, and some of them are from eighty to a hundred feet long, though only about eight feet broad. The excavation is effected partly by fire and partly by cutting implements. Every town in the vicinity of the river, besides its quota of men, is obliged, when called upon, to furnish a certain number of these boats, of which it is supposed that the king can muster 500. They carry from fifty to sixty rowers, each provided with a sword and lance, besides whom there are usually thirty soldiers armed with muskets; while on the prow, which is flat, a piece of ordnance, weighing from six to twelve pounds, is mounted. On coming in view of the enemy, they draw up in a line, with their prows in front, sing a war-song, push on with impetuous rapidity, and immediately attempt to grapple, when a desperate struggle takes place. The larger boats also seek to run down the smaller, which the latter elude with great dexterity. Gilded barges (*fig.* 642.) can be used only by princes of the blood and persons of the very highest rank, and they are often very highly ornamented. The naval arsenal, also, of the Cochin-Chinese appeared to Mr. White very deserving of admiration; and the skill of their shipwrights is much superior to that of the Birmans. He saw one teak plank 109 feet long, and has even seen trees of this description which would make a natural main-mast for a ship of war. The state barges are richly decorated with gilding and carved work, and with floating pennons and streamers. On land, the Birmans and Siamese trust chiefly to their stockades, which they throw up with surprising skill and expedition, and which sometimes resisted even the most impetuous attacks of a British force. In general, however, none of these troops can stand the charge of a disciplined army, but, as soon as their defences are penetrated, they take to flight with precipitation. In Cochin-China only a regular army has been organised and trained in the European manner: this force, in 1800,

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Royal Golden Barge.

was estimated at 140,000 men; but Mr. Crawfurd does not imagine it at present to exceed 50,000, of whom the royal guards amount to 30,000.

The revenue of the sovereign, in these kingdoms, consists of a land tax, or rather rent; for the whole country, according to the idea prevalent in the East, is esteemed the property of the monarch. This tax is levied in the form of a proportion of the produce, which in Birmah amounts to a tenth, and is paid in kind. The other source, derived from foreign commerce, is levied partly in the form of customs, but more frequently in the ruinous and unproductive one of royal monopoly. This, in Siam, extends to every branch of foreign trade, and in Cochin-China to those which are supposed most productive. From these various sources, however imperfectly administered, money is continually entering the royal coffers, and little or none ever goes out, for services are paid by grants of land, villages, customs, &c., by which the grantee is enabled to make out an income for himself. The Eastern kings are thus enabled to effect a favourite object of their ambition, in the accumulation of treasures, believed in several instances to be immense. The vague reports which Major Symes heard respecting the ample resources of the king of Ava seem confirmed by the promptitude with which he paid the large tribute exacted by Britain as the price of peace. Mr. Crawfurd was informed that the treasure of the king of Cochin-China amounted in gold to 7,140,000 dollars, independent of what might exist in the form of silver.

Sect. V.—*Productive Industry.*

The productive capacities of this region are very ample. It yields all the grand staples of tropical produce. The valleys of its great rivers, which possess the expanse of plains, are watered, and, at periodical intervals, extensively inundated, by numerous streams of various magnitude flowing down from the mountain ridges, to swell the great rivers; and by these means copious moisture, which, under this climate, almost alone suffices to secure an ample vegetation, is constantly supplied. The principal culture consists of rice, the food of all these nations; sugar of fine quality, pepper, preferable to that of the Malay countries, and cotton. The sides of the great ranges of hills are covered with luxuriant timber of various species and great value. There are large forests of teak, a wood now found to be preferable, from its strength and durability, to any other, for the purposes of ship-building. Large boats, as already observed, are often cut out from a single tree, and a great quantity is now produced for the supply of the naval arsenals of British India. Even the fir is found on the tops of the upper mountains, and in Major Symes's opinion might be employed with advantage in masts, for which teak is too heavy. The woods abound also with ornamental trees, canes, rattan, &c., and with others yielding rich gums, which serve for varnish and other purposes. Stick lac and gamboge are among the chief articles of export. From other shrubs are obtained the areca nut and betel-leaf, that universal article of luxury and ceremony in all Indian countries, but which has never made its way into Europe. Cardamoms are a spice for which a large market is found in China, and there is some cinnamon in Cambodia; but in general these regions are not productive of the finer species.

Cultivation is very generally diffused, and is conducted in the west on the Indian model, and in the east on the Chinese; but it is not practised in the same perfection, or with the same patient industry, as by either of these nations. The sugar and pepper of Siam are chiefly raised by Chinese settlers. Domestic animals are little used in cultivation, and in Ava the Brahminical principle prevents them from being made articles of food. Animals are tamed chiefly for conveyance or pomp; and for these purposes the elephant, here found in greater perfection, and more highly prized, than in any other country in the world, is chiefly employed.

Manufactures exist only on a limited scale, and in a rude form; the raw materials which the country affords being worked up mostly by the family itself for domestic use. Those brilliant and beautiful fabrics which are the boast of China and Hindostan are not produced here, and the quantity used is imported from those countries, especially from the latter. The only fabrication on which much study is bestowed is that of idols, which are fashioned out of a fine species of marble found in the country, and generally gilded; but none are accounted sacred except those constructed at Chagaing.

The commerce of these countries is also limited. They produce in abundance all the conveniences and necessaries of life, without any of those peculiar products, as the finer spices and the finer manufactures, which attract traders from the most distant parts of the globe. Their chief intercourse is with China, and consists in the exchange of their raw produce, rice, cotton, timber, ornamented woods, varnishes, or some species of the fine manufactures of that great empire. The cotton and other products of the Birman empire are carried up the Irawaddy to a great *jee*, or market, in the frontier province of Yunan. Britain takes of teak timber to the amount of about 200,000*l.*; in return for which, some British manufactures are received. The trade of Siam and Cochin-China is chiefly carried on by Chinese junks coming to the port of Bankok in the former country, and those of Turon, Hué, and Saigong, in the latter. Mr. Crawfurd reckons that about 116 junks come annually to Cochin-China, carrying 20,000 tons; and somewhat more than double that num-

ber to Siam. There is also some trade with the rising British settlement at Singapore; but these governments have declined all overtures for arranging a regular commercial intercourse.*

Some fishery is pursued on the coast of Cochin-China, and dried fish forms one of the exports of China. On these shores is also collected a large quantity of gelatinous birds' nests, and of the substance called sea slug, tripang, or *biche de mer*, for which there exists an extraordinary demand in the Chinese market.

SECT. VI.—*Civil and Social State.*

The population of all this range of kingdoms is a question of extreme uncertainty. Major Symes was informed that the number of cities, towns and villages in the Birman empire amounted to 8000; and this, allowing an average of 1800 to each, would give 14,400,000. This, too, is exclusive of Arracan; so that, altogether, he imagines 17,000,000 to be rather under than above the real amount. This very conjectural calculation, however, appears to Captain Cox over-rated; and his estimate of 8,000,000 is generally esteemed to be nearer the truth. Captain Franklin even reduces it to 5,000,000, and Captain Canning to 4,000,000.† Mr. Crawfurd allows 2,730,000 for the entire population of the kingdom of Siam, of which the proper Siamese are supposed to amount to 1,260,000; the Chinese settlers, 440,000; the inhabitants of the part of Laos subject to Siam, 840,000; the Malay dependencies, 190,000. This is upon an estimated superficial extent of 190,000 square miles. The same intelligent observer estimates Cochin-China, Cambodia, and Tonquin to contain 98,000 square miles; and, supposing them to be as fully peopled as the neighbouring provinces of China, they would have 5,194,000.

The people by whom all this territory is inhabited present several peculiarities of external form. Mr. Crawfurd even apprehends them to be radically distinct from any other Asiatic race. Their persons are short, robust, active, but devoid of the grace and flexibility peculiar to the Hindoo. Their face, flat, with high cheek-bones, presents the form of a lozenge, and never suggests any idea of beauty. The hair is abundant, black, lank, and coarse; but the beard is scanty, and universally plucked out, which gives them an effeminate appearance. They have a gloomy, churlish, sullen air; a slow, sluggish, and ungraceful gait; but this last part of the description seems nearly confined to the Siamese. Upon the whole, though they borrow the outward forms of life from the Chinese and Hindoos, they are not schooled into that mechanical routine of observance which is so firmly established in those countries. Much greater freedom prevails in the intercourse of society; they are quick, likely, and stirring. The Birmans appear to be an active and intelligent people, possessing in this respect a decided superiority over the Hindoos. The Siamese are said to be sluggish and indolent, destitute of courage, candour, and good faith; and so imbued with national pride, that foreign residents cannot obtain a servant to perform for them the most menial offices. They esteem the lowest Siamese to be superior to the greatest subject of any other nation. They are, however, peaceable, temperate, and obedient to the laws.

Grand Kioum, or Monastery.

The religion of these countries, like all others in the East of Asia, is derived from Hindostan; yet, like the rest also, it consists not in the Brahminical doctrine, but in the rival system of Boodh. The name, however, most venerated in all the countries beyond the

[* The United States have recently effected a commercial treaty with Siam.—AM. ED.]

[† According to Mr. Crawfurd, the area is 184,000 square miles, and the population 4,000,000.—AM. ED.]

Ganges is Gaudama, or Goutama; either another appellation of Boodh, or that of one of his most popular disciples. The construction of temples and images of Gaudama forms the grand operation to which the art and industry of all these nations is directed. Frugal and indolent in every thing else, they spare neither cost nor labour on this object. Major Symes considers the grand *kioum*, or monastery (*fig.* 643.), the residence of the *seredaw*, or head of the Birman church, as perhaps the most magnificent structure in the universe. Mr. Crawfurd observes that the monarchs here erect none of the public works which are common in other countries of Asia,—neither bridges, wells, tanks, nor caravanserais; but bestow all their treasures upon temples. The principal one, at Bankok, was said, in 1795, to have cost 58,180*l*. The temples, which serve also as monasteries, contain a large space for worship, a depository for the images of Gaudama, a library, and dwellings for the monks or clergy. The materials are by no means very solid, consisting chiefly of brick or mortar: it is on the timber of which the gates and the interior are composed that the expenditure is lavished. These are painted, varnished, gilded, and carved in the most profuse and laborious manner. The principal temple in Ava is about 600 feet in length, and the interior is adorned with upwards of 200 pillars, fifty or sixty feet high, and entirely covered with gold leaf. But the most remarkable of all these edifices is that at Pegu, called Shoemadoo Praw, or the temple of the Golden Supreme (*fig.* 644.). It is raised on two successive terraces, the lower of which is ten feet above the ground, and the upper twenty feet above the lower. The building is pyramidal, composed of brick or mortar, and rises to the height of 361 feet, without excavation or aperture of any kind; but it diminishes very rapidly as it ascends, so that its form has been compared to that of a large speaking-trumpet. The whole is covered with a *tee*, or umbrella, fifty-six feet in circumference, the placing of which forms a high religious ceremony, and gives to the temple its sacred character.

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Temple of the Golden Supreme.

The framing of the images of Gaudama ranks as principal of the few fine manufactures established in these kingdoms. The chief seat in Ava is Kycock Zeit, a place in the district of Chagaing. The material is a valuable marble found in the neighbourhood, and each image is formed of one single block, and then gilded entirely over. Some of these images, designed for the great temples, are of gigantic dimensions. That of old Ava has a head eight feet in diameter, and measures ten feet across the breast; the hands are upwards of five feet long, and the entire height is twenty-four feet; yet the whole is described as consisting of a single block of marble. An image in the great temple of Siam is said to be still more stupendous. Peculiar sanctity was attached to the Arracan Gaudama, which, however, was only ten feet high, made of burnished brass, as were the gigantic images of Rakuss, the Hindoo demon, which were also among the spoils brought from that conquered territory. The marble in these images is polished by a peculiar process, which gives it a lustre superior to that which can be bestowed by European artists, and the gold leaf is laid on with great skill. There are about thirty or forty yards crowded with workmen, who are employed in making images of various dimensions and prices. One, somewhat above the human size, might be purchased for twelve or thirteen pounds; while for poor or frugal devotees, there were little Gaudamas, which could be had for about half a guinea.

The priests of this religion, as in all the other branches of the worship of Boodh, are monks residing in the temples, and living in a state of celibacy. In Ava, they are called rhahaans, in Siam, talapoins; but in the latter country, at least, as we are informed by Mr. Crawfurd, they are bound by no vows, and may quit the order whenever they please; and it is so common to assume and leave the profession, that almost every man has been a talapoin for some part of his life, even if only for a few days. Great part of their time is spent in insignificant and even absurd ceremonies; yet their ministration is useful in several respects. They instruct the children in reading, and so diligently, that few in the Birman territory are ignorant in this respect.

Literature is by no means unknown or neglected in Further India. The Birman language is a compound of the ancient Pali with the Sanscrit, the Tartar, and the Chinese. The difficulty occasioned by this complication is greatly increased by the mode of writing, in which, according to Mr. Judson, "the words are not fairly divided and distinguished, as in

western writing, by breaks and points and capitals, but run together in one continuous line, a sentence or paragraph seeming to the eye but one long word; and, instead of clear characters on paper, we find only obscure scratching on dried palm-leaves strung together, and called a book." In the royal library, however, the writing is beautiful, on thin leaves of ivory, and the margins ornamented with flowers of gold. The books are kept in gilded and japanned chests. The contents of each are written on the lid in gold letters. The bulk of the works were said to be on divinity; but history, music, medicine, painting, and romance had also their separate treatises. The library appeared very large, and is suspected by Major Symes to be more numerous than that of any monarch from the Danube to the borders of China. The literary character of Siam does not seem so eminent. The talapoins consider it inconsistent with their profession to cultivate any branch of learning except theology. Even medicine is neglected, and the physicians are chiefly adventurers from China. The Siamese have, however, songs, romances, and a metrical chronicle of the country, in 400 cantos, which requires six weeks to recite. With the literature of the more eastern nations we are little acquainted, but it appears to derive its origin from the Chinese.

The customs of these countries allow to the female sex a much greater measure of liberty than in almost any other country of the East. They are neither immured nor veiled, nor withdrawn from the company and conversation of the other sex. This freedom, however, is not accompanied with any disposition to allow them that place in the scale of society which justly belongs to them. They are treated as the mere slaves of the stronger sex; all the laborious duties are devolved upon them, and they manage most of the transactions of buying and selling. Their conduct, at least in Ava, is said to be generally correct, unless as respects a very singular arrangement, into which they are ready to enter with any stranger who comes to reside in the country, even for the shortest period. An unmarried female is then leased out to him, and during that time resides with him as his wife, manages his household, and assists him in carrying on his traffic; but on his departure she must not accompany him, but returns, without any discredit, to her relations, by whom it is probable the arrangement was made. It seems to be connected with the idea of the female being the property of her male relations; and the same traffic is carried on in Cochin-China to a still more scandalous extent. Funerals in all these countries are celebrated with much pomp, and the bodies of the great lie for some time in state: in Ava they are embalmed, while those of ordinary subjects are committed to the funeral pile. Mr. Crawfurd mentions an odious custom prevalent in Siam, of cutting off pieces of the flesh and feeding birds with them. In Cochin-China a great festival is held on these occasions, which continues for ten or twelve days, and is celebrated with indecent mirth and hilarity.

The fine arts are not neglected in this region. The architecture of the temples is an object of great attention, but they are ornamented rather by the profuse expenditure of paint and gilding, than by tasteful or august forms. They do not, as as Mr. Crawfurd observes, possess the solemn grandeur which befits an edifice of this description, and they possess a richness and brilliancy at variance with its character. Vocal music meets with considerable admiration. The females have fine voices, and sing with sweetness, though to very simple tunes, resembling, perhaps, the Chinese. They were unable to follow or relish the varied stream of harmony which flows through an Italian opera. These people are fond of dramatic entertainments; but they have no regular theatres as in Europe. The performers either go to private houses, or perform in public, trusting for remuneration to the voluntary donations of the spectators.

The habitations in these countries are of slight materials, but commodious. Bamboos fixed in the ground, and tied horizontally with stripes of rattan, compose the outline, and serve as the supports of the building. Covered with mats they form the walls, and with grass the roof. A spacious mansion can be built in a day, and a tolerable one in four hours. When Major Symes proceeded in his embassy, he had a house erected in every place where he was to make any stay. Yet these slight structures are found sufficiently comfortable; and even if they should be unable to withstand the fury of the elements, their fall is attended with no danger, since the ruin of the whole fabric would not crush a lap-dog. The devastation occasioned by fire, however extensive, is regarded with equal coolness. In the cities of Siam, the houses, built almost entirely along the river, are generally floating upon it, being fastened to the bank by the bamboo rafts. Even the comparatively small number built on shore are raised by posts above the swampy surface of the ground. Mr. Finlayson describes the houses of Cochin-China as built chiefly with mud, roofed with tiles, and as being large and commodious. About one-half consists of an open hall, where they receive visiters and transact business. In the back part of the hall are placed an altar and other emblems of religion; and the private apartments are disposed in recesses behind. According to Mr. White, they are furnished with hanging chambers, into which air is admitted by wooden gratings, and which are ascended by ladders; but the dwellings of the poor are miserable, and the want of glass must occasion always a great diminution of comfort.

The dress in these countries exhibits the same contrast as in the rest of the East; that of the poor slight and scanty, that of the rich peculiarly splendid. The attire of the ordinary

Birman females is merely a loose robe or sheet, tucked under the arm, which scarcely serves the purposes of decency; and the working classes are usually naked to the middle. The Birman nobles wear a long robe of silk or velvet, with a mantle and a cap of the same material, which are often richly flowered and embroidered with gold. The attire and all the ornamental articles indicate the rank of the owner, and must on no account be assumed by an inferior class. The use of gold, in ear-rings, large quills and masses, and as the material for the betel box, spitting-pot, and drinking-cup, designates a nobleman of the first rank. The Cochin-Chinese are better clothed than most Eastern nations, being generally covered from head to foot with substantial silk garments.

For purposes of food, the most western nations, whose institutions are Hindoo, proscribe the use of animals, though various modes are employed for eluding this prohibition. The Birmans esteem it enough that they do not eat any tame animals, and consider that whatever comes under the denomination of game is lawful provision for the table. Within this range they include lizards, reptiles, and many objects viewed with disgust by Europeans. The Siamese have contrived to lull their consciences still more easily. They hold it a crime to put any animal to death: but, this sin once committed, and its effects irretrievable, they consider it as a venial offence merely to partake of the flesh. The most scrupulous satisfy themselves with an assertion that the animal has been killed by accident. The more Eastern people, whose habits are Chinese, labour under no such scruples, but, without the same necessity, follow the usage of that nation, in welcoming as food whatever they can take,—rats, mice, worms, frogs. They even feast on the flesh of the cayman or alligator; and a species of white maggot, found in palm buds, is considered as a delicacy fit for the royal table. The entrails of animals and other refuse thrown overboard from the English ships is eagerly collected and eaten by the Cochin-Chinese, whom Mr. White even accuses of having a predilection for filth. In Tonquin the flesh of the dog is said to be eaten, and considered as a great delicacy.

Sect. VII.—*Local Geography.*

The countries between India and China may be divided into the British territories ceded in consequence of the late successful war; the kingdom of Ava or the Birman empire; the kingdom of Siam; and the empire of Anam or Cochin-China, comprehending, as already mentioned, Cambodia and Tonquin.

The territories ceded to Britain consist of Assam, with some appended territory, the former kingdom of Arracan, the provinces of Yeh, Tavoy, Mergui, or Tenasserin, and Martaban, extending along the western coast of the Malayan peninsula, and of Malacca itself.

Assam is an extensive, somewhat rude territory, to the north of Ava, and the east of Bengal, the possession of which was desired, less from its intrinsic value, than as a barrier to the British possessions. It is bordered on the north by very lofty ranges of mountains, continued from the Himalayah, and watered by upwards of sixty rivers, of which the principal is the broad channel of the Brahmapoutra, which is supposed by some to take its rise among the mountains of Assam. A great part of its surface, thus profusely watered, possesses a luxuriant fertility; yet the rudeness of the inhabitants renders the gifts of nature fruitless, so that nine-tenths of its surface consist of desert and jungle. A considerable quantity of gold, however, is found in the sands of its rivers, and, combined with elephants' teeth and coarse silk, affords a certain value for exportation.

Assam has several rude appendages; on the east the country of the Garrows, an almost savage race, wildly gay, yet ferocious in war, and even accused of cannibalism; the territory of the Kookies or Lunctas, also a wild tribe of hunters and warriors; Gentiah, the country of the Kosayah, represented as offering human sacrifices. To the south it has Cachar, a country nearly similar to itself, though somewhat more populous; and south of Cachar, Cassay or Mechley; the people of which are milder and more industrious than any of the above, and bear a greater resemblance to the Hindoos. While attached to Ava, they in a great measure supplied the empire with muskets, and formed the best horsemen in its armies. Munnypoor, the capital, was nearly destroyed by the Birmans in the last war.

Arracan reaches along nearly the whole eastern coast of the Bay of Bengal, an extent of about 500 miles. The interior is closely bounded by a high mountain range, called Anopectomiein, which consists in a great measure of pestilential marsh and jungle. The plain, however, between the mountains and the sea, the breadth of which varies from ten to one hundred miles, is extremely fertile in rice and other tropical productions. The cultivation, however, being imperfect, it is not supposed to contain more than 100,000 or 120,000 inhabitants. Arracan, the capital, at the mouth of the river of the same name, which forms here a noble expanse of water, is a large city, and the seat of some considerable trade. A new and improving station has been formed by the British at Akyab. By means of boats, betel and other productions of Ava are conveyed down the river, and exported to Bengal. The other chief exports are rice, bullion, salt, bees'-wax, and elephants' teeth. Cheduba, a large and very fertile island, Ramree and Sandowy, form districts of Arracan.

The worship of Boodh, under the name of Gaudama, is fully established in Arracan; and the Arracan image of that revered being has been mentioned as possessing peculiar sanctity. There are, also, a considerable number of Mahometans, who have been attracted by motives of trade. The native Arracanese are often called in Bengal Mug or Mughs, from the term *mogo*, which they apply with peculiar reverence to their priests and great men. Arracan maintained for a very long period an independent existence; yet was subdued without much difficulty by the Birmans, and is now transferred to Britain. Extension of empire was not on this side an object; but the navigation of the bay is thus secured against piracy, and considerable commercial facilities are obtained. The revenues of Arracan, according to the estimate of 1830–31, would amount to 410,000 rupees; the expenses to 190,000.

The Malayan provinces extend along the eastern coast of that peninsula, where it continues to border on the Bay of Bengal, and have been long a debateable ground between the Birman and Siamese empires. Their population is thus estimated:—Yeh, 3000; Tavoy, 15,000; Mergui, 8000; Martaban, 24,000: in all, 50,000. They are not distinguished for fertility, the plain along the sea-coast being soon encroached upon by the range of bleak mountains which stretches along the whole interior of this peninsula; but they possess the finest and most salubrious climate to be found, not only in this empire, but in any part of the East Indies. The sick, in the late war, who were sent thither from Rangoon, experienced a rapid recovery. By means of this coast, also, an opening is afforded into the finest interior provinces both of Ava and Siam. Amherst Town, recently founded on the river Saluen, which forms the boundary between this territory and the Birman empire, will, it is expected, become the seat of an important commerce. The revenue of these provinces, according to the estimate of 1830–31, would be 307,000 rupees; the expenses, 100,000.

Malacca, though by the treaty of 1814 it was restored to the Dutch, was, in 1825, ceded to England, in exchange for her possessions in Sumatra. It was one of the earliest settlements of the Portuguese, and continued for a long time to be a great emporium of the trade of the Oriental islands, as well as a place of refreshment for vessels bound to China; but since Prince of Wales' Island and Singapore, under the protecting sway of Britain, have risen to their present importance, the port of Malacca is much less frequented. It has, however, a safe roadstead, a salubrious climate, cooled by a succession of sea and land breezes, with some industry and cultivation, carried on chiefly by Chinese. The population of the town is stated at 4790; that of the country at 33,800. The imports, in 1827–8, amounted to about 134,000*l.*; the exports, to 104,000*l.**

The Birman empire is formed into two important divisions;—Pegu, once its rival, but now its subject kingdom, which comprises all the sea-coast and the mouths of the rivers; Ava or Birmah, occupying the upper valley of the Irawaddy, and the present seat of the ruling power. Pegu is a sort of delta, entirely traversed by the alluvial branches of the Irawaddy, Pegu, and Saluen rivers. Its valleys are of extreme fertility, and particularly productive of rice; so that it serves as a sort of granary to the empire. It has also spacious forests, abounding in teak, which requires a soil at once moist and rich. Ava consists of a plain of less extent, closely hemmed in by mountains, and by no means of equal fertility; but it is also well cultivated, abounds in timber, and its brave and hardy inhabitants have generally held in their hands the supremacy over both nations.

Rangoon, the grand emporium of the empire, is situated on one of the branches of the river of Pegu, and extends for nearly a mile along the water. It is not so well built as the capital, and, indeed, to the members of the late expedition, it appeared little better than a huge assemblage of wooden huts. The custom-house is the only edifice in the town that is built of brick. The population, however, is about 20,000. It is composed in a great measure of foreigners from all the countries of the East, and of all religions, who have been encouraged to settle here by the liberal policy of the Birman government. The exchange presents a motley and confused assemblage of Mahometans, Parsees, Armenians, and all the commercial tribes of the East. The chief ornament of Rangoon is the great temple of Shoe Dagon, or Dagoung, which, though not quite so elevated as the Shoemadoo of Pegu, is as highly ornamented, and contains in its precincts 1500 rhahaans and other religious persons employed in the service of Gaudama.

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*[The following estimate has been made of the extent and population of the British territories in Further India:—

	Sq. Miles.	Population.
Assam, with dependencies	54,000	150,000
Arracan	11,000	100,000
Provinces south of the Saluen, Tavoy, Yeh, Martaban, and Tenasserim, with the Mergui Isles	12,000	51,000
Malacca	800	35,000
Total	77,800	336,000

AM. ED.]

Pegu, the ancient capital, was reduced, after the conquest, to a state of complete desolation. Alompra rased every dwelling to the ground, demolished the walls, which from their fragments appear to have been thirty feet high and forty feet broad, and spared only the praws, or temples. For some time, the only object was to terrify the Peguese into submission by the most severe examples. The present king, adopting a milder policy, has made it his main object to conciliate his Pegu subjects. For this purpose nothing was so grateful as to allow them to rear again their fallen capital. The scattered inhabitants have been invited to return, and new settlers have been encouraged by liberal grants. The residence of the maywoon or viceroy has also been removed thither from Rangoon. Possessing, however, neither the splendour of a royal capital, nor a commodious site for extensive trade, Pegu has attracted only a small proportion of its former crowded population. Major Symes does not suppose it at present to contain more than 5000 or 6000.

Many important places occur, in ascending the river, before we arrive at the capitals of Ava. Meyahoun is an ancient Pegu city, the splendour of which is marked by numerous gilded spires and spacious convents. The surrounding country is so fertile, especially in rice, as to render it almost a granary of the kingdom; and large depôts of grain are maintained here by the sovereign. Prome, the ancient frontier of Ava and Pegu, and at one time a residence of the Pegu kings, carries on a great trade in timber, and is said to be somewhat more populous than Rangoon, but contains no edifices of remarkable splendour. A continued succession of towns and villages, among which Meeaday is the most important, continues till we arrive at Pegassin, or Paghan. This city, the ancient and splendid capital of Birmah, at a time when a higher taste in architecture appears to have prevailed than at present, abounds with magnificent remains of temples and royal edifices.

The capitals of Ava are situated nearly at the termination of the plain of the Irawaddy, after it has taken a westerly direction, and begun to be contracted by the upper mountains. The original capital, bearing the national name of Ava, or Aungwa, was quitted by Alompra for Ummerapoora, and exhibited to Major Symes that aspect of desolation which always covers an Asiatic capital from the moment it ceases to be the residence of the court. The slight wooden materials of which the palaces of the grandees consist were easily transported to the new metropolis. The walls were mouldering in decay; ivy was clinging to their sides; thorns, bamboos, and a few plantains, allowed to grow unmolested, covered the greater part of its site. Only the temples were left untouched, and were sinking under the silent operation of time. Sailing upwards about twenty miles, through a continued succession of houses and villages, the traveller was cheered by the majestic spires and turrets of the new capital, rising amid a wide expanse of water, which, when the river is high, surrounds it like a lake. The principal part of Ummerapoora is the fort, or rather fortified city, more than a mile square, and within whose precincts are contained all that is splendid and that belongs to the court in Ava. The magnificence of the palace consists chiefly in its halls, adorned with gilded pillars, and white silk umbrellas bespangled with gold, while the enclosing walls are merely of brick. But the temples are most profusely ornamented without, as well as within; and their lofty spires or piasaths, richly gilded or burnished, make a magnificent appearance. Captain Franklin estimated the inhabitants at 175,000 from the official number of 25,000 houses, allowing seven to each house; but as the houses had been enumerated with a view to taxation, the number was probably under-rated. But it is finally to be stated, that what Ummerapoora lately was, Ava now again is. In 1824, the seat of empire was transferred back to the old capital, which soon doubtless became the centre of Birman splendour; and the majestic edifices of Ummerapoora are now mouldering in ruin.

The interior details of Siam are known only to a very limited extent. The early capital, Yuthia, was abandoned after the Birman conquest, when Piatac, a chief of Chinese origin, reared again the standard of Siamese independence. He then transferred the capital to Bankok, farther down the river, and more favourably situated for trade. Bankok may be regarded almost as a city floating in the water. The houses are little more than large wooden boxes, of an oblong form, extremely neat, and thatched with palm leaves. They extend in rows eight or ten feet from the bank, to which they are fastened by long bamboos. They are divided into several small apartments, the most central of which is assigned to the household gods; while in front of many is raised a platform on which are spread rice, fruit, and other articles, forming a species of floating bazaar. These habitations, though diminutive, are said to be tolerably comfortable, and can, of course, be moved with the utmost facility from one place to another. Each house has a boat belonging to it, which is almost the only vehicle for moving through the city; and the habit of continual rowing gives to the arms both of men and women a disproportionate size. These floating mansions are chiefly inhabited by Chinese, who appear to form the majority of the inhabitants of Bankok, and monopolise almost every department of trade and industry. The chief trades are those of blacksmith, tinsmith, and currier, which, by a singular conjunction, are in the hands of the same person. The tin vessels are highly polished, and the leather, dyed red, is used, not

for shoes, but for pillows and mattresses. The Chinese, from these occupations, derive a very handsome livelihood, and live plentifully and grossly, on pork, oil, and fat; consuming more value in food in a week than the Siamese does, or can afford to do, in two or three months. The shore, meantime, is covered with numerous palaces and gilded temples (*fig.* 645.), and with the habitations of the grandees, raised by posts above the ground, which is yet so swampy as to render it scarcely possible to walk or drive through the streets. The travelling is chiefly along the river, in richly gilded and ornamented barges.

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Spire at Watanaza.

Chantibond forms the most eastern district of Siam, and is in some respects superior to the flat and alluvial plain which immediately borders the river. Situated on the slope of the mountains which separate Siam from Cambodia, it forms a hilly and romantic region, covered with noble forests, and abounding in valuable aromatic plants. Pepper is the most important object of cultivation, being produced to the annual amount of 20,000 piculs, and capable of almost indefinite augmentation. Cardamoms, though not equal to those of Cambodia, are produced for the Chinese market. The forests contain some very fine odoriferous woods.

The coast and rivers of Cochin-China and Cambodia are of different aspect; they are not bordered by the same vast extent of fertile and alluvial territory. Almost the whole coast of Cochin-China is composed of steep cliffs, which, from their rugged forms, and the sharp pinnacles in which they terminate, appear to consist of granite, and between which and the sea there is scarcely a level interval. From their coves, indeed, are seen issuing fleets of boats, which give the idea of industry and plenty; but a nearer inspection shows them to be miserable in the extreme. These little barks are composed chiefly of split rattan, with bamboos for masts, the bark of trees for tackling, and mats for sails. They form the whole habitation of their occupants, whose entire property is embarked in them, and who have no food except the fish which can be drawn from the waters. The great rivers which traverse these two countries, though they descend from fertile and smiling valleys of the most romantic aspect, are hemmed in at a short distance by mountains of the same peaked and rugged character as those which border the coast. Although, therefore, these rivers are as ample as those of Siam, the valleys include not nearly the same extent of fertile and productive land.

Hué, the capital of Cochin-China, is situated on the river, about ten miles above its entrance into the fine bay of Turon. The scenery of this stream appeared to Mr. Finlayson the most beautiful and interesting he had seen in Asia. A fertile valley, covered with the cocoa-nut, the banana, the sugar-cane, and elegant hedges of bamboo, is bounded by the lofty mountains already described. The view of numerous and apparently comfortable villages enlivens the scene. Hué consists of a large quadrangular fort, or rather fortified city, which constitutes one of the most complete and remarkable military structures in Asia. Each side is about a mile and a half in length, the rampart about thirty feet high, cased with brick and mortar. It is built in the regular European style, with bastions, a glacis 200 feet broad, and a ditch. An hundred thousand men were constantly employed in the works, during the period of their construction, and 1200 cannon were mounted on the walls. It is supposed that 40,000 troops would be required to garrison the place. Here also the king keeps his fleet of galleys.

Saigong, the capital of Cambodia, is situated near the mouth of the noble river of Donnai. It consists of two closely contiguous parts, called Saigong Proper and Bengeh. The latter is fortified, and is the residence of the viceroy; but Saigong Proper is the chief theatre of trade, and conducts entirely that of the fine valley in which it is situated. The united city is described by Mr. Finlayson as very large; each of its parts appeared to him equal to the capital of Siam: and Mr. White reports, from official documents, the population of the whole to amount to 180,000, of whom 10,000 are Chinese. The markets are plentifully supplied with native products and those of the neighbouring countries. The manufactured articles are chiefly of the latter description, and scarcely any European goods are to be seen. There is a superb naval arsenal formed under European direction, and which, from the very fine timber of the country, has produced 150 galleys of the most beautiful construction.

Tonquin, of the three kingdoms now subject to the sway of Cochin-China, is the largest, most fruitful, and most valuable. Its character is still more decidedly Chinese than that of the others; and indeed, it was only in the eighteenth century that it separated from that

empire, retaining all its forms and institutions. Both the English and Dutch have attempted to open an intercourse with Tonquin, where fine and cheap silks, lackered ware, and some gold, may be obtained; but the arbitrary exactions of the mandarins, and the little demand for foreign cloths, in consequence of costumes fixed by law being worn by all the orders, rendered it a losing traffic, and it has been almost wholly abandoned. Kesho, situated about twenty miles from the mouth of the great river of Tonquin, has been said by one traveller to contain only 40,000 inhabitants; but Mr. Crawfurd understood, what is indeed probable, that it is larger than any city either of Cochin-China or Cambodia; in which case the above estimate must be greatly under the truth. We want the information of some recent and intelligent traveller respecting Tonquin.

CHAPTER VIII.

CHINA.

This vast empire, containing the greatest amount of population, and, perhaps, also of wealth, united under one government, occupies a large portion of the south-east of Asia.

Sect. I.—*General Outline and Aspect.*

China composes a broad expanse, nearly square, two sides of which are bounded by sea and two by land. The sea is the great Pacific Ocean, which, however, does not here present a well-defined outline, but is broken into great gulfs. Of these, the chief is denominated the Sea of China, enclosed by Borneo, the Philippines, and Formosa; and the Yellow Sea, bounded by Tartary and Corea. The interior boundary consists of a range of thinly peopled tracts, occupied only by wandering and barbarous tribes, Mandshur Tartars, Mongols, Kalkas, Eluths, and the eastern tribes of Great Thibet. These regions have usually given rulers to China; but at present the empire, or, at least, its reigning dynasty, comprehends within its sway upwards of 1000 miles in every direction of these rude territories. It holds them, however, as tributaries only, or under loose military occupation, and without any attempt to impose on them the police, the laws, or the general character of China itself. At the same time, the whole of this vast frontier is guarded with equal care against the approach of foreigners. Communication is left open at two solitary points: only one, the port of Canton, to the maritime nations of Europe; the other, Maimatchin, on the Siberian frontier, to the subjects of Russia. The south-western angle alone touches upon civilised territories, partly the Birman empire, partly Tonquin, now included in the empire of Anam, or Cochin-China.

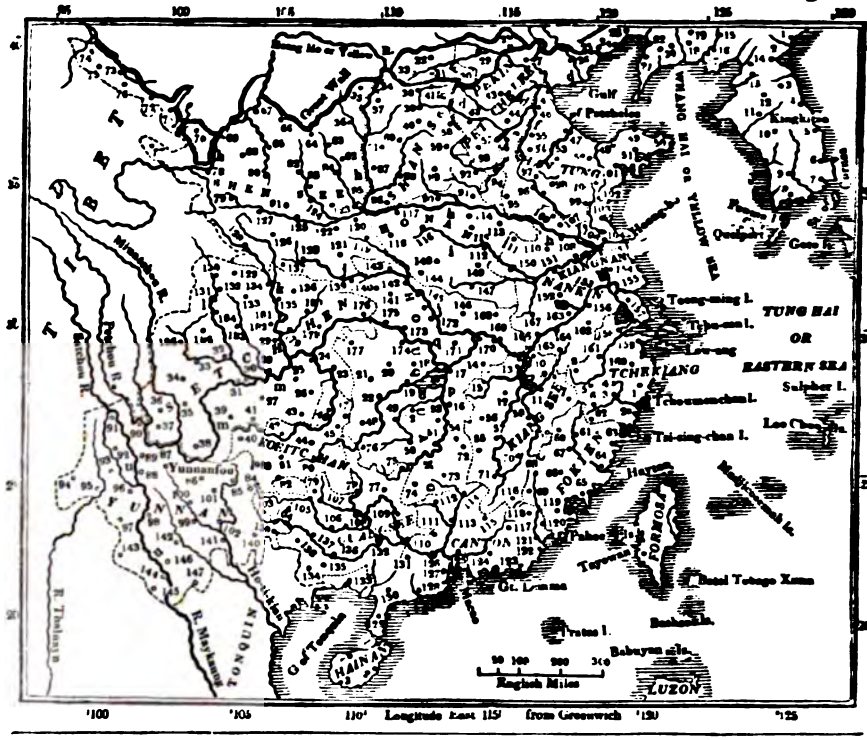
[The Chinese empire, stretching from 18° to 56° of north latitude, and from 70° to 140° of east longitude, covers an area of about 5,350,000 square miles, or one-tenth of the whole land-surface of the earth. The population of this vast region, according to the most probable modern computation, is about 183,000,000, as follows:—

China Proper	148,897,000
Corea	8,463,000
Thibet and Boutan	6,800,000
Mandshuria, Mongolia, Zungaria, Chinese Turkistan, &c.	9,000,000
Colonies	10,000,000
Total	183,160,000

Of this vast expanse of territory, the China Proper of our maps, Mandshuria, and the eastern part of Little Bucharia, form the political China of the imperial administration. The other regions are merely tributaries or protected states; the petty chiefs of Thibet, the country of the Deb Rajah or Boutan, and the kingdoms of Corea and Loo Choo, belong to the latter class. The ruling race is the Mandshur or Mantchoo, which over-ran and subdued China nearly two centuries ago. The Mantchoo is the language of the court, and of a rich literature.—Am. Ed.]

China Proper, now exclusively under consideration, may be generally stated as extending from 20° to 41° of north latitude, and from 101° to 122° of east longitude. This makes 1260 geographical miles in length, by 1050 miles in breadth. According to an official statement presented to Lord Macartney, and which might probably approach the truth, the superficial extent amounted to 1,298,000 square miles, or about eight times the dimensions of France. Of this vast surface, the greater part consists of a level plain, alluvial, and sometimes marshy, but in general capable of the highest cultivation, which it actually receives.

Close observers, however, have traced considerable chains of mountains traversing the empire. Of these, the most important seems to be that which runs through the southern provinces, and forms a continuation, though on a much lower scale, of the Great Himalayah. In Yunan, on the eastern frontier, where it first enters the empire, its ridges, which appear to be very steep and lofty, nourish bands of lawless and predatory tribes. But in the eastern



References to the Map of China.

NORTH PART.

1. Peyticn
2. Longsing
3. Ossetcheou
4. Sinngyang
5. Pinghay
6. Yenghi
7. Kitchang
8. Yoping
9. Sining
10. Tchingay
11. Kingkitao
12. Conchan
13. Tchengtchen
14. Yuchia
15. Taipi
16. Sotcheou
17. Eytjou
18. Tamena
19. Ouslie
20. Sienouyuen
21. Yonnimkien
22. C ltcheou
23. Kingtcheou
24. Ningyuen
25. Pinnanim
26. Yougpingfou
27. Peking
28. Yeukingtcheou
29. Paouganteheou
30. Yutcheou
31. Yngtcheou
32. Taitoungfou
33. Soutcheou
34. Pao'cheou
35. Couchan
36. Soutetcheou
37. Hinghien
38. Taitcheou
39. Hintcheou
40. Taiyuenfou
41. Fankihien
42. Tchingtingfou
43. Paotingfou
44. Tchingtcheou
45. Payho
46. Tsangtcheou
47. Pintcheou
48. Laitcheoufou
49. Tsingtcheoufou
50. Sinchanso
51. Kiotcheou
52. Tomtcheoufou
53. Teinanfou
54. Cantangtcheou
55. Tetcheou
56. Payhou
57. Chuntefou
58. Pingtingtcheou
59. Leaotcheou
60. Fuentcheoufou
61. Chelsouhien
62. Youngnanfou
63. Paouganhien
64. Tsinpiesing
65. Pingfong
66. Tingpiesing
67. Lingtcheou
68. Singanpoi
69. Yungngapou
70. Yougtaitching
71. Yougngipou
72. Yangtchangpoi
73. Kantcheou
74. Tchinchouipou
75. Hongtchouipou
76. Nancoutching
77. Silling
78. Lantcheou
79. Kongtchangfou
80. Kouyuentcheou
81. Longtcheou
82. Kingyangfou
83. Ningtcheou
84. Pou'cheou
85. Tingtseuou
86. Kinitcheou
87. Kitcheou
88. Piuyangfou
89. Lounganfou
90. Hoaikingfou
91. Ouekiunfou
92. Tchangtefou
93. Se'cheou
94. Taymingfou
95. Tunetcheou
96. Tsingintchoo
97. Tongpintcheou
98. Yentchoofou
99. Ytcheou
100. Lutcheou
101. Coamihien
102. Tchintching
103. Haitcheou
104. Ngantong Hien
105. Hoinganfou
106. Kieou Pitcheou
107. Licoy
108. Pesutcheou
109. Sati hou
110 Siaoutcheou
111. Potcheou
112. Changchoufuhien
113. Tsitcheou
114. Tchingtcheou
115. Kutcheou
116. Tyangbien
117. Tchentchou
118. Louchihien
119. Changtcheou
120. Hoatcheou
121. Tchinngnanhien
122. Singanfou
123. Yaotcheou
124. Pingtcheou
125. Fongtsiangfou
126. Peitcheou
127. Tsuintcheou
128. Kiaitcheou
129. Longuanfou
130. Pingnaing
131. Hoeitcheou
132. Mientcheou
133. Tsetonghien
134. Tchaobahien
135. Paokingfou
136. Patcheou
137. Ningtsiangtcheou
138. Haitchongfou
139. Hingngan cheou
140. Tchouchaahien
141. Fanghien
142. Koutchinghien
143. Tuenyangfou
144. Tengtcheou
145. Siangyangfou
146. Tenganfou
147. Senyang cheou
148. Nanyangfou
149. Yunnhingfou
150. Hingtcheou
151. Fongyangfou
152. Liutcheoufou
153. Nanking
154. Keoye-outchou
155. Tchangtchoufou
156. Tapingfou
157. Soutcheoufou
158. Hangtcheoufou
159. Ningpofou
160. Sintcheouhien
161. Yentcheoufou
162. Nhingtouefou
163. Youhoueitcheou
164. Tchitcheoufou
165. Kimenhien
166. Ngankingfou
167. Yocha hien
168. Matchinghien
169. Hoangtcheoufou
170. Outebang
171. Miensyangetchou
172. Nganfoufou
173. Yinitcheou
174. Yonhien
175. Kouetcheou
176. Kceitcheoufou
177. Chetcheouenes
178. Leangchanhien
179. Kouangngantcheou
180. Tatcheou
181. Pantcheou
182. Chunkingfou
183. Kientcheou
184. Hantcheou
185. Yatcheou
186. Mosimien.

SOUTH PART.

1. Taitchoufou
2. Quentcheoufou
3. Tchutcheoufou
4. Kinghoafou
5. Kiutcheoufou
6. Languiencheu
7. Kouangsnfou
8. Kaihoahien
9. Kintschin
10. Houkouahien
11. Yaotchoufou
12. Chouitcheoufou
13. Nanchangfou
14. Tongchanhien
15. Nhingtcheou
16. Tchangchafou
17. Youhouefou
18. Tongtcheou
19. Tchangtefou
20. Kiaoukiou
21. Tongtchuenou
22. Tchangtcheoufou
23. Pongchuihien
24. Peitcheou
25. Kikianghien
26. Tchingantcheou
27. Tououeitou
28. Tchaticoutcheou
29. Ho'cheou
30. Souitcheoufou
31. Mahoufou
32. Kiatingtcheou
33. Tchaikingkoou
34. Ningpanouei
35. Hochio
36. Lankuou
37. Yongpefou
38. Hiangtcheoupou
39. Ounsongfou
40. Oueiningfou
41. Tchinhingfou
42. Kiensitcheou
43. Tsungfou
44. Pingyuenfou
45. Tchihyuenfou
46. Semanfou
47. Tongjiafou
48. Yuentcheou
49. Soukiou
50. Pachingfou
51. Hengtcheoufou
52. Ngantcheou
53. Siangtanhien
54. Yenchien
55. Yongchinghien
56. Yuentcheoufou
57. Kinganfou
58. Foutcheoufou
59. Kientchangfou
60. Chaocoufou
61. Kiennhingfou
62. Kingyuenhien
63. Founhingtcheou
64. Foutcheoufou
65. Siuen'cheoufou
66. Yongngnahien
67. Yenpengfou
68. Tingtcheoufou
69. Oupinghien
70. Nhingtou
71. Kantcheoufou
72. Tchalintcheou
73. Tchiagtcheou
74. Ta-tcheou
75. Tsuentcheou
76. Tsintcheou
77. Yongningtcheou
78. Hoaiguenhien
79. Nantantcheou
80. Tongyuenfou
81. Tingtantcheou
82. Kiangou
83. Pogantcheou
84. Lopingtcheou
85. Louleangtcheou
86. Yuenanfou
87. Yanganfou
88. Hongchoufou
89. Taifou
90. Likingfou
91. Houaiu
92. Yanleogtcheou
93. Yongtchangfou
94. Suntafou
95. Vangsuenou
96. Chinningfou
97. Mung-en
98. Tchinyuentoufou
99. Yuenkiangfou
100. Sinpingchien
101. Tchingtiangfou
102. Tingnanfou
103. Kouangnanfou
104. Setchingfou
105. Natitcheou
106. Ngantitcheou
107. Hotchitcheou
108. Lieouteheoufou
109. Pingtofou
110. Outcheou
111. Quangningchien
112. Tientcheou
113. Yatchien
114. Chaotcheoufou
115. Liangpingtcheou
116. Tchangpaing
117. Tchangtchien
118. Tchinpiahien
119. Chantcheoufou
120. Jaopin
121. Tchaotcheou
122. Hayauee City
123. Hiechetchin
124. Hoeitcheoufou
125. Cantou
126. Tchaokingfou
127. Sinhoeihien
128. Kangkiunghien
129. Lautcheoufou
130. Houtcheou
131. Lotingsheou
132. Sintcheoufou
133. Kintcheou
134. Taipingfou
135. Sinaingtcheou
136 Nanningfou
137. Tienchou
138. Tchiungnfou
139. Touf ntcheou
140. Kouehoufou
141. Nakeupo
142. Naouli
143. Mongtien
144. Tchelitchumfou
145. Mongpan
146. Sunnouriha
147. Mongpin.

ISLE OF HAINAN.

1. Kiongshanoufou
2. Ounsicheou
3. Tsintcheou
4. Hopou.

Rivers, &c.

a Lan, R.
b Baiho, R.
c Yuncleam Canal
d Tam-ho, R.
e Hou-to-ho, R.
f Ea ho, R.
g Grand Canal
h Hoang-ho, or Yellow River
i Hoai-ho, R.
j Han-kiang, R.
k Kialing-kiang, R.
l Ho-choui-Ho, R.
m Lincha-Kiang, R.
n Ou kiang, R.
o Yuen kiang, R.
p Hong kiang, R.
q Yan-gtse-kiang, R.
r Kan-kiang, R.
s Pearl-kiang, R.
t Mo-ti-kiau, R.
u Lou-tsan Ho, R.
w Tongting Lake
x Poyang Lake.

provinces, their pinnacles seldom rise above 3000 or 4000 feet; and, being covered with noble forests, crowned with pagodas, and with cities along their sides, they give to the country a magnificent aspect, without interrupting its culture and populousness. The ground also rises rapidly as it approaches the northern frontier, which is formed or crossed by mountains of considerable height, and over which that stupendous bulwark, the Great Wall, has been carried with incredible labour. These chains also, according to Chinese maps, which form here our only authority, penetrate at different points into the interior provinces.

The pride of China, and the exuberant source of her wealth and fertility, consist in the mighty rivers by which, through its entire breadth, the empire is traversed. The two great twin streams of the Hoang-ho, or Yellow River, and the Kian-ku, or Yang-tse-kiang, rise from distant and almost unknown sources in the heart of Tartary. The former, as it enters China, is bent by the frontier mountains into a northerly course, which it follows for several hundred miles, until it reaches the desert depths of northern Tartary. Fortunately for China, it then again bends, and, after making a circuit, flows, opposite and parallel to its former course, into the interior of the empire, and fertilises several of the finest provinces in its progress eastward to the Yellow Sea. Its banks here are entirely alluvial, and the quantity of mud and earth brought down with it give its waters the appearance of diluted clay. According to Mr. Barrow, it pours into the sea, every hour, 2000 feet of solid earth, sufficient in seventy days to accumulate an island of a mile in circumference; and, in fact, the depth of the Yellow Sea has been observed very sensibly to diminish. The Yang-tse-kiang rises in Thibet, very near to the Hoang-ho; but in approaching China it takes a great contrary bend to the south, till it is at one point about 1000 miles distant from the other. Then, bending northward, it approximates to the Hoang-ho, and, after watering all the great central provinces, reaches the sea by an estuary scarcely 100 miles distant from it. The two rivers appear each to flow upwards of 2000 miles; but the Yang-tse-kiang is rendered the noblest, both by the magnitude of its stream, and by the superb cities with which its banks are adorned. It is called by the Chinese "the first-born of Ocean," and appears to be without a rival, unless among the waters of the New World. Both have great and numerous tributaries, which serve important purposes of commerce and irrigation. The Peiho, or river of Peking, the Kan-kiang, and the river of Canton, afford also valuable means of internal communication.

Of lakes, China comprises in its central region the Tongting, about 300 miles in circumference, and covered with a numerous population, who subsist by fishing; the Poyang, surrounded by picturesque and finely wooded hills, and by considerable cities; with several others of less magnitude; but these, on the whole, do not cover any very great proportion of her vast surface.

Sect. II.—*Natural Geography.*

Subsect. 1.—*Geology.*

The Geology of China is unknown. A few facts, in regard to its minerals, occur incidentally in books of travels and works on the statistics of that vast empire. Rubies, corundum, topaz, tourmaline, lapis lazuli, jasper, agate, jade, marble, porphyry, granite, syenite, are enumerated among the precious and ornamental minerals. Earthy felspar or kaolin, an important ingredient in the manufacture of porcelain, occurs abundantly in some parts of China; and beds of coal are described as extending through considerable tracts in the northern parts of the country. Gold is obtained from the sand of rivers in the provinces of Se-tchuen, and Yunan, near the frontiers of Thibet. Silver in the native state, and also combined with sulphur, antimony, and lead, or as ores, occur in considerable abundance; but no mines of silver of importance are mentioned. No gold or silver money is coined. The *tutenague* is a white metallic substance, of which the Chinese make vessels and chandeliers. The copper pyrites, or yellow copper ore, of Yunan and other provinces, is used for making small coin which is current throughout the whole empire. The *pa-kfong*, another ore of copper, is also extensively worked. Lead and tin, it is said, occur much less abundantly than copper: that which is exported from Canton comes from Thibet and Japan. Mines of mercury abound in Yunan. *Realgar*, or native sulphuret of arsenic, is employed by the Chinese in blocks, for making pagodas and vases.

Subsect. 2.—*Botany.*

China, situated between the 21st and 42d degrees of latitude, and the most easterly longitude of any part of the Old World, possesses a temperature which will appear very low, by comparison with that of the corresponding western countries that are washed by the Atlantic Ocean.

From this circumstance, and from a reference to the notes relative to the vegetation of China which are scattered in the writings of travellers, we shall admit that the Equatorial Flora of China does not extend beyond the 27th parallel, even under the most favourable

circumstances. If this idea be entirely correct, the chain of the Milin mountains, which runs from west to east for upwards of 1000 miles, and then turns abruptly to north-east when within a short distance of the sea, dividing from the rest of the empire the southern provinces of Yunan, Koang-si, Canton, and the eastern province of Fo-kien, marks the termination of the Equatorial and the commencement of the Transition Zone.

With regard to temperature, M. de Humboldt, on grounds unknown to us, states the mean of Canton to be + 22.9°. He observes that the thermometer sinks to zero, and that, by the power of radiation, frost sometimes forms on the terraces of the houses. The latter assertion is confirmed by the remarks of Lord Macartney and of Krusenstern. The English embassy, arriving in Canton in December, 1793, found that a fire in the chimney was by no means unwelcome, and thirteen years afterwards, in the same month, Krusenstern saw that ice was selling in the streets. These colds are instantaneous; and do not prevent the vegetation from being entirely equatorial.

Among the most remarkable families of plants in the southern provinces, we shall enumerate the Palms, the Laurel and Caper tribes, the Menispermeæ, Malvaceæ, Bombaceæ, Camellias, Ternströmiaceæ, Aurantiaceæ, Sapindaceæ, Magnoliaceæ, Terebinthaceæ, Rhamneæ, Leguminosæ, Myrtaceæ, &c. The cultivator grows together, the Banana, Guava, Orange, Papaw, Cocoa, Litchi, Tea, Sugar-cane, Peach, Apricot, Vine, Pomegranate, and Chestnut; but the latter seldom produce good fruit. This combination of the trees of India and Asia Minor may also be observed on the western coast of the Isle of Formosa, between the 22d and 25th degrees of latitude.

Few of the vegetables of the Equatorial Zone are seen beyond the Milin mountains. The northern side of these mountains, sometimes rocky and barren, in other places overshadowed with large forests of Oak, Hornbeam, and Poplar, are subject to long and severe winters, during which the valleys are covered with snow. Between these mountains (lat. 25° to 27°) and the Yellow River (lat. 35°), vegetation presents all the peculiarities of the Transition Zone. Various species of Orange, Lemon, Tea, Sugar-cane, Rice, and Pomegranate, the Black and White Mulberries, the Vine, Walnut, Chestnut, Peach, Apricot, and Fig, are grown on the same spot; but neither the Palms, Banana, Guava, Papaw, nor any other species which requires the steady and continued heat of the equatorial regions. The plains produce a species of Bambusa, the Phyllanthus Niruri, the Pride of India (*Melia Azedarach*) (*fig.* 647.), and Stillingia sebifera (*fig.* 648.), which yields a kind of wax that is manufac-

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Melia Azedarach.

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Stillingia Sebifera.

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Cunninghamia Lanceolata.

tured into candles by the Chinese, the Thea chinensis, several Camelias, among them the Sasanqua (from which they extract an oil of very inferior quality to that of Olea europæa, which is unknown to them), the Olea fragrans, Sophora japonica, Sterculia platanifolia, Ailanthus glandulosa, Vitex incisa, some Clerodendrons, Mimosas, Neriums, and Rhamni, the Horsechestnut, the Abies orientalis and Pinus Massoniana, probably also Pinus longifolia and P. Pinea (for we surmise this latter to be the fir tree, from the large cones of which the Chinese were seen by Staunton to collect, and eat eagerly the kernels), different kinds of Juniper and Cypress, the Cunninghamia lanceolata, (*fig.* 649.), Podocarpus macrophylla, Thuja orientalis, Sallows, &c.

On the lovely banks of the Yang-tse-kiang, or Blue River, and of the southern streams which swell its waters, the Camphor tree, the Stillingia sebifera, the Chestnut and Bamboo (that giant of the Grass tribe), grow together, with the Pines, Thuja, and Cypress, whose dark hues and uniform aspect contrast strikingly with the rich, brilliant, and varied vegetation which surrounds them. The Nelumbo, or Sacred Bean of India (*Cyamus Nelumbo*), displays its superb flowers on this river. The Bamboo forms forests in Tche-kiang (lat. 29° to 30°,) and with the Pine follows the boundaries of Kiang-si (lat. 24° to 30°), and of Kiang-nan (lat. 30° to 35°). The whole zone abounds with Coniferæ, and the mountains are adorned with Pines, or, at least, with large trees bearing so close an affinity with them, that a botanist alone could point out the difference. In Kiang-si, whole hills are covered with

Camellia Sasanqua (*fig.* 650.); while those which encircle the town of Thong-kiang (lat. 29°) are crowned with Orange trees. This tree, with the Lemon, is still seen at Koue-te-fou (lat. 34° 30′), on the right bank of the Yellow River. Everywhere the Tea plant grows in the hedges. Staunton, the editor of Macartney's Travels, assigns lat. 30° as the northern limit of this shrub; but he is in error: it grows much farther. The leaves are gathered at Tchang-tchou-fou, in lat. 32°, and, if Linnæus be correct, also at Peking; which does not seem improbable, though there is no positive confirmation of the statement, since Kæmpfer avers that it is found in the vicinity of Jeddo, in the Japanese island of Niphon, where the temperature in winter must be very low. Supposing the fact to be correct as stated by Linnæus, it will afford an additional proof of what the influence of summer heat can effect in fortifying against the cold of winter. The Sugar-cane has not been traced farther north than lat. 29° or 30°; which is in Se-tchuen, a western province, bounded by the mountains of Thibet, and probably colder than the maritime districts in the same latitude; which induces the belief that the Sugar-cane is probably cultivated more to the north, in Tche-Kiang and Kiang-nan. In the more northerly parts of China, winter displays many of its characteristics in the course of the seasons. In lat. 30°, near the port of Hing-pe, Stillingia sebifera sheds its leaves in November. A degree and a half north of this place, at the mouth of the Blue River, winter prevails for a fortnight, during which snow falls nightly, and melts at the first rays of the sun. Bouvet, an eye-witness, relates that in February, 1688, at seventy-five miles from the sea, in lat. 34°, the snow fell, and the Hoang-ho, or Yellow River, was obstructed with ice, the latter having probably been brought by the water from a higher part of the country. It seems incontestable that in Petchelee, which does not extend beyond lat. 42°, but which rises gradually from the Hoang-ho and the Yellow Sea to the Great Wall, the rivers are frozen from the end of November to the middle of March; and that, at Peking (in lat. 39° 54′), the winters are very severe, though the Oleander, the Vitex Negundo, and the Sacred Bean of India, grow in its environs.

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Camellia Sasanqua.

The above stated facts warrant the taking of the Yellow River and the Hoti-ho River as the line of separation between the transition and the Temperate Zones.

After the above extended remarks, from the laborious Mirbel, on the general vegetation of China, it cannot be supposed that we shall enter at large upon the few interesting species which are familiar to us, either from their use or their beauty, whence they have recommended themselves to general culture in our green-houses and conservatories; among which will rank pre-eminent the Camellias, with the almost unlimited variations of C. japonica (*fig.* 651.). The Sugar-cane (*Saccharum officinarum*), though so extensively cultivated in the West Indies and elsewhere, is considered to be a native of China. The same may perhaps be said of the Orange. Rice (*Oryza sativa*), equally distributed through the warmer regions of the Old and the New World, is perhaps more generally grown in China than in any other part of our globe; and the name is applied to a Chinese production, a most delicate material for drawing upon, and for manufacturing artificial flowers, known under the appellation of Rice Paper, from an incorrect notion, perhaps, that Rice was employed in its composition. But if this paper be held up between the eye and the light, an exquisitely beautiful cellular tissue is discoverable, such as no art of man could produce or imitate. It was, then, a subject of much gratification to us, that our late friend, Dr. Livingstone, surgeon to the Factory at Canton, favoured us with a specimen of the paper, enclosing a portion of the stem of the plant from which it is cut. The latter is evidently herbaceous; the piece is about four inches long, hollow in the centre, with a membranous transverse septum at each end, so that it appears to be the joint of a stem. The diameter is about an inch, and the thickness of the parenchymatous substance is little more than half an inch, but of the purest possible white. This piece might, therefore, be cut into a sheet or leaf, though only of four inches in length, yet of considerable breadth: for it would of necessity be cut in such a manner as to unroll like a scroll of common paper.

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Camellia Japonica.

The cutting of this material into leaves or laminæ is not performed by transverse sections, but made vertically round the stem. The most perfect stems are selected for this purpose; few, however, being so free from knots as to produce a cutting more than nine or ten inches long. It was Dr. Livingstone who first brought from China to Europe a quantity of this substance, which he presented, about twenty-nine years ago, to Miss Jack, who was celebrated for the beauty and accuracy of her artificial flowers. Formed of rice paper, they obtained additional celebrity, fetched very high prices, and were eagerly sought for by persons of the greatest rank and most acknowledged taste. For a bouquet which Miss Jack presented

to the Princess Charlotte, she received the regal present of 70*l*. When Dr. Livingstone first procured the rice paper from the Chinese, the pieces did not exceed four inches square; they were dyed of various shades and colours, and cost about 6*d*. each square. Since that time the price has been much reduced, and the size of the pieces increased, so as to be upwards of a foot long and five inches across, and preserving their natural whiteness. The tinted pieces are employed by the Chinese for their artificial flowers, and the plain white for making drawings upon. Now, this material is so much esteemed in Europe, that it is in request with all persons who visit Canton. It is to be regretted that the plant producing this curious and beautiful material is not known to botanists; for we are satisfied that, in the *Botanical Miscellany* (vol. i. p. 90.), two substances are confounded under the name of Rice paper, the soft and spungy stems of the Æschynomene paludosa (called Shola in Hindostan, and described at page 335 of this volume), and the stems producing the substance in question, which are of a far more delicate texture, peculiar, we believe, to China, and as far as can be judged from a drawing which has been communicated to us, belong to the Malvaceæ; an opinion, as we think, also entertained by Professor Lindley.

Tea is a vegetable which has lately risen into such infinite importance to mankind, and which is so restricted, in its still extended cultivation, to China and its dependencies, that we should hardly be excused did we not offer some remarks upon it. Two kinds of Tea plant are commonly cultivated in our green-houses; the one under the name of Thea viridis, or Green Tea, the other of Thea Bohea, or Black Tea; and which appellations had been given them, partly, as it would appear, on account of the relative colours of the foliage, and partly under the impression that the former produced the Green Tea of the shops, and the latter the Black Tea. But this idea seems to be founded upon no good authority, as we shall presently show; and even with regard to T. viridis and T. Bohea, botanists are by no means agreed as to their specific identity: indeed, a general opinion prevails that they are mere varieties; an opinion, however, in which we do not coincide. Thea viridis is a large, strong-growing, almost hardy plant, with its branches spreading, its leaves three to five inches long, very broadly lanceolate, pale green, singularly waved, the margin reflected: the flowers are large, solitary, mostly confined to the upper axil: they appear in autumn six weeks or two months earlier than those of T. Bohea (*fig.* 652.): while the latter is of smaller size, with remarkably erect stiff branches, leaves not above half or two-thirds the size of the former, perfectly flat, more coriaceous, dark green, bearing, in the axils of numerous leaves, two or three flowers, which are smaller and have a slight fragrance, and are in perfection during winter. It will not endure our frosts. Both kinds are indeed so frequent in collections, that every one has the opportunity of examining them and exercising his own judgment as to the importance of their characters. The difficulty is much greater in determining which of these species is the one cultivated in China: whether both may not be employed in the production of the different kinds of Tea, or whether they may not be indiscriminately used: for the Chinese are exceedingly jealous over the processes employed in the preparation of Teas; and, the Tea country being at a great distance from the European Factory, it is very doubtful if any scientific person has, from actual personal observation, been able to decide the question.

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Black Tea.

An assertion is, indeed, (and, perhaps, rather too hastily,) made in the General System of Gardening and Botany, namely, that "all the different kinds of teas brought to this country from China are the produce of Thea viridis;" and again, under Thea Bohea, "This is falsely called Bohea Tea; as we find the Bohea teas of the shops, as well as other kinds, both green and black, to be the leaves of the former species, T. viridis." Dr. Abel, in his Narrative of a Journey to the Interior of China, satisfactorily notices the two kinds of tea plant under consideration, and he adds, "from persons conversant with the Chinese method, I learned that either of the two plants will afford the black or green tea of the shops; but that the broad, thin-leaved plant (T. viridis) is preferred for making the green tea." This statement is corroborated by our valued friend, Charles Millett, Esq. of Canton, who holds a high official situation in the Company's Factory there, and to whom we wrote to request information on the subject. "The Tea plant," he says, "is almost as scarce in the neighbourhood of Canton as it is in England. The tea country is at a great distance from hence, and the teas brought to Canton are several months on their route by inland navigation. Of the plants there are two kinds; of which one has a leaf of a much darker green than the other. This difference may partly arise from cultivation; but it is to the various modes of preparation, that the green and black Teas (as they are called in England) of commerce, are due. In proof of this, we sent home, last year, Green Tea from the Black Tea plant: you may, therefore, conclude, that though there are two plants, differing as much in appearance and growth as any two varieties of the Camellia japonica, each, by proper management, will produce black

or green Tea indifferently. The varieties of teas from the several provinces arise from soil, culture, mode of preparation, and, above all, from the part of the shrub whence the leaves are pulled. From the same individual plant, indeed, there are three crops or gatherings annually; the first affords the finer teas, of which the Pouchong is the produce of the larger leaves on the young shoots. The extreme shoots, with the opening leaf-buds, constitute the Peko. This is, in England, commonly supposed to be the flowers: but an examination, after infusion, will clearly show its origin. The first picking takes place in June, the second in July, and the third-in August." We may add, that Kæmpfer's figure of the Japanese Tea plant, which is evidently the plant in general culture in that empire, is the Thea Bohea, not the T. viridis.

The native country of both the species, is, probably, various parts of China; and the cultivation seems to be confined to the Temperate Zone, extending to the northern provinces of the Empire, and as far as lat. 45° N. in Japan. But the Tea districts, properly so called, are thus stated by Dr. Abel: — that of the Green Tea is in the province of Kiang-nan, between 29° and 31° N. lat., at the north-western base of a ridge of mountains, which divides the provinces of Tche-kiang and Kiang-nan: the Black Tea district, in the province of Fo-kien, is contained within lat. 27° and 28° N., and is situated on the south-eastern declivities of a ridge of mountains dividing the province of Fo-kien from that of Kiang-si.

The different kinds of tea of commerce, as known to us, are not very numerous: but the Baron de Schilling has given the names of thirty-six sorts, copied from a Chinese MS. in his possession. Some of the appellations are very curious. The Black or Bohea Teas, if we may judge from their names, are most esteemed; such as Lao-kiun-mei, or "venerable old man's eyebrows;" Pekao, "white hairs," "palm of the immortals," &c. The leaves of some kinds are used to dye stuffs black, others of a golden colour. All the different sorts of tea may be distinguished, by the experienced merchant, merely by the taste. The situation of assayer of teas at Canton requires this sort of faculty, and the individual who holds it enjoys a salary of 1000*l.* per annum for tasting teas only!

The quantity of tea produced in China must be enormous; for, with the exception of Japan, it has not been found practicable, though often attempted in Brazil and elsewhere (and mainly on account of the higher price of labour), to cultivate it to advantage anywhere but in China Proper: and there the Tea plant is spread, and not very thinly spread, over a square area of 1,372,450 square miles. It is now a common beverage throughout the whole civilized world. Its use in China reaches to a very high antiquity. An Indian prince, according to the Japanese, a holy and religious character, of the name of Darma, visited China, about the year 516 of the Christian era, with a view to instruct the natives in the duties of religion. He led a life of great abstinence, and denied all manner of rest or relaxation to his body; but he was at length so weary of his fatigues and fasting, that he fell asleep. As a penance for so great a dereliction from duty, he cut off both his own eyebrows, the instruments and ministers of his crime, and threw them upon the ground: each eyebrow became a shrub, and that shrub the one now called Tea; whose virtues were, till then, as unknown to the world as the plant itself. Darma quickly discovered the agreeable properties of the foliage, which endowed his mind with fresh powers to pursue his divine meditations. Having recommended the use of it to his disciples, it soon became general in China, and has now extended to the remotest regions of the earth: while the individual who first discovered its qualities is held in remembrance by a rude figure, in Chinese and Japanese drawings, of an old man standing upon water, with a reed under his feet, and one of his eyebrows sprouting out into a tea leaf.

Linschot is said to be the first traveller who tells of an herb with which the Japanese prepare a drink, and which they offer to their guests as a mark of high consideration. Caspar Bauhin speaks of it, in his Pinax, under the name of Cha. It was very early in the 17th century that tea first became known in Europe; and we are assured that the Dutch at first carried on a trade, by recommending the Sage, which they gave in exchange for Tea of China. The use of the former soon ceased; while that of the latter daily increased among us. Little more than a century ago, according to Lord Macartney, the English East India Company did not sell more than 50,000 lbs. of tea, and very little was smuggled. In 1784, the consumption of Great Britain was estimated at 1,333,814 lbs.: now, that of Great Britain and Ireland, exclusive of the dependencies, amounts to more than 30,000,000 lbs.

Lords Arlington and Ossory brought home a quantity of tea from Holland, about the year 1666, at which time it was sold for 60*s.* per lb. But the practice of tea-drinking, even in public coffee-houses, was not uncommon in England prior to that period; for, in 1660, a duty of 8*d.* per gallon was laid on the liquor made and sold in all coffee-houses. In the sister country of Scotland, a century more elapsed before tea was generally known. It has been stated, and, we believe, on the authority of Sir Walter Scott, as proving how long a time had passed before tea came into common use in his native land, that people are yet living who recollect how the Lady Pumphraston, to whom a pound of fine green tea had been sent as a rare and valuable present, boiled the same, and served it up with melted butter, as condi-

ment to a salted rump of beef, and complained that no cooking she could contrive, "would make these foreign greens tender!"

The United States consume about 12,000,000 lbs. of tea, and the Russians rank next as consumers of this article. Their trade with the "celestial empire," as may be conjectured by the proximity of their territories, is by land; and it is said, that, in consequence of it, the tea is of a superior quality to that which has been subjected to a long voyage. It is sent from Russia to Germany, where it fetches a high price, under the name of Caravan Tea. But, in Russia, a peculiar kind of tea, not known in other parts of Europe (and, indeed, in Russia its consumption is confined to the Asiatic territories), is Brick Tea; a term frequently made use of in the interesting travels of Ledebour in the Altaïc Mountains, and which has lately been explained to us, and a specimen shown us, by the Reverend William Swan, an intelligent missionary, who has resided for ten years at Selinginsk, in Asiatic Russia, where Brick Tea is in very general use among the Mongolian tribes and Bouriats. It is produced at Fo-kien, and consists of old or coarse damaged leaves and stalks pressed into moulds and dried in the oven. Of this a small quantity is taken, pounded in a mortar, and infused for a long time in boiling water before the infusion is ready; which, however, is too bad for the Chinese taste. The people above mentioned generally add to it a little salt and milk, and sometimes flour, fried in oil.

Linnæus had the honour of introducing this interesting and valuable plant alive to Europe: but not till he had experienced many disappointments. The seeds would never bear the voyage; for, like all oily seeds, they turned rancid in a short time. His pupil Osbeck brought a living plant as far as the Cape of Good Hope, where it was washed overboard during a storm. Lagerstrœm conveyed two shrubs, for the true tea, to Upsal: but they turned out to be Camellias, which the Chinese call by the same name; not distinguishing it (any more than some able European botanists) generically from Thea. Some time after, one reached the harbour of Gottenburg in good health: but, the evening before landing, the captain set the plant on the table of his cabin, where it was eaten by rats. At length, Linnæus advised Captain Elaberg to sow the fresh seeds in pots of earth at the moment of his departure from China; so that they might vegetate after passing the line; and the growing plants were thus brought in safety to Gottenburg on the 3d October, 1763, and transported to the botanic garden of Upsal.

SUBSECT. 3.—*Zoology.*

The native Zoology of China is as little known as its internal geography; nor do we ever recollect to have seen or heard of preserved animals having been sent from this part of Asia. The vague accounts of the old travellers cannot be much relied upon. Excessive population has no doubt extirpated or driven away the native quadrupeds of any considerable size, nor can many birds be expected in a country where every acre of ground is sedulously cultivated. These remarks, of course, apply only to those provinces which form the heart of the empire, while of the rest we are in complete ignorance.

Of the Ornithology, some notion may be formed from the numerous drawings of birds, now in Europe, executed by native artists, and from a few gleanings made from other sources. The Pheasants of the interior are magnificent birds, and no less than four species appear as natives of the northern provinces bordering towards Central Asia. Three of these, namely, the Ring, the Golden or Painted (*fig.* 653.), and the Pencilled Pheasants, have been long domesticated; and, from their great beauty, are the chief ornaments of our aviaries; but the Superb Pheasant (P. superbus) is only known from drawings, and from its beautiful tail feathers, which occasionally are sent to Europe as curiosities.

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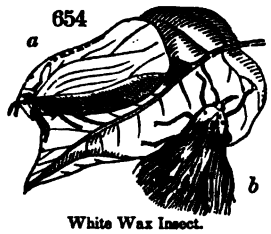
Golden Pheasant.

The Fish, delineated by the natives, exhibit a great variety; and from China we have derived the gold and silver fish of our ponds.

The Insects are numerous and splendid. The common sorts are put into little deal boxes, well preserved, and sold to Europeans at the factories. The Chinese Lantern Fly emits a strong phosphoric light from its long trunk-like snout. The Bombyx Atlas *F.* is one of the largest moths in the world, measuring full eight inches from one tip of the wings to the other.

The White Wax Insect (*fig.* 654, *a*) deserves a more particular notice, as producing an important necessary of life. The perfect insect (*b*) has been named by Fabricius *Cicada*



White Wax Insect.

limbata, but it is the larva which furnishes the substance itself. Sir George Staunton mentions them as insects not much exceeding the size of a fly, having very curious pectinated appendages, rising in a curve, and bending towards the head; the whole insect being covered with a white powder: this powdery substance is imparted to the stems of the plants, upon which these insects are found in thick clusters; it is then collected by the natives; hot vegetable oil is then applied, and the whole, when cold, coagulates, and becomes as firm as bees'-wax. As a medicinal drug it is in high estimation throughout China, and, when made into candles, is reckoned superior, for that purpose, to bees'-wax.

The Silkworm, now cultivated in southern Europe, and in the United States, is said to have come originally from China, and there appear to be other species capable of producing silk cocoons of nearly equal value. The singularity of this people is likewise apparent in their fondness for beautiful insects: little cages with living specimens of shining and splendid beetles (*Buprestides*), and of chirping Cicadas, being exposed in the markets, and hung in the drawing-rooms, for the amusement of the wealthy.

White Ox.

The Domestic animals are better known than the wild ones. The Chinese Oxen are of the humped kind, and appear to be of two breeds. One is equal to the smaller British race, with very short horns, bent back, and the colour of the hide frequently white (*fig.* 655.). The other, or dwarf Zebu, is so wonderfully small as not to exceed the size of a hog: it is commonly grayish white, with or without very little horns. The Pigs, also, are proverbially small.

Sect. III.—*Historical Geography.*

No country has experienced fewer revolutions than China, or has sustained so little change from those to which it has been actually subjected. The brief notices of the Roman historians, in the first centuries, represent the Chinese to have been precisely such a people as they now are,—quiet, peaceable, industrious; and to have had, even at this early period, silk, and perhaps tea, for their staple productions. The Chinese, indeed, possess a much more complete and connected series of annals than any other nation of Asia. Some of these, indeed, are manifestly fabulous, ascending to a period of 49,000 years. The Shooking, however, the first strictly official portion, begins only at the credible date of 3000 years before Christ. At that time, the country is represented to have been in a state of almost complete barbarism, and the invention, first of the necessary and then of the ornamental arts, is ascribed, in these regal documents, to successive early kings of China. It appears, however, that, about five centuries before the Christian era, China was divided among a number of petty princes, who acknowledged in the emperor little more than a feudal supremacy. About this time arose Confucius, whose master mind, improving, probably, on the ideas of his predecessors, established those principles of law, manners, and government which have since predominated in China. A series of struggles continued during many ages. These being at length suppressed, a complete despotism, tempered, indeed, by institutions and customs calculated to give it a mild and protecting character, was established. Thus situated, the nation lost its military energy, and became an easy prey to those barbarous neighbours who roam over the high table-lands of central Asia. But China has civilised her invaders; and the manners and institutions of the empire have survived the shocks of successive conquest. The most perilous was that made in the thirteenth century by Zingis Khan, a ferocious chief, who committed destructive ravages, and even formed the dreadful design of converting all China into a pasture-field; but this project was happily renounced. His successors made it their study to maintain, restore, and reform the abuses of the Chinese institutions. They were supplanted by a native Chinese dynasty, bearing the appellation of Ming; but in the middle of the seventeenth century the Mandshur Tartars, from the northern side of the Great Wall, again over-ran the empire, which, however, they appear, from the first, to have governed mildly, and according to its ancient laws and institutions. This dynasty has greatly extended the foreign dominion of China. Retaining and enlarging their northern possessions, they have extended their empire so as to be in contact with that of Russia, for the space of sixty degrees of longitude. They have added to it all Eastern Tartary, to Cashgar, inclusive; and, within the last eighty years, Thibet, formerly a sacred and independent territory, has been compelled to own their sway.

Sect. IV.—*Political Geography.*

There is not, and perhaps never was, on the face of the earth, a government more purely and entirely despotic than the Chinese. No power, honour, or distinction exists, except that

which centres in, and emanates from, the sovereign. In every other country, even of Asia, there are some hereditary offices; some descendants of ancient princes; above all, some classes elevated, as it were, to a higher scale of social existence than the rest; by all which means, strong and permanent lines of demarcation are drawn between the different portions of the community. In China, no distinctions are owned between man and man, except those conferred by office; and to these, the highest and the lowest are permitted equally to aspire. This supreme power of the monarch is claimed for him as the representative of Deity on earth, and the sole representative; for the Chinese, proud of the extent and populousness of their own empire, and very ignorant of all beyond it, are easily persuaded that the world does not contain a nation which is not subject or tributary to the "son of heaven." One God in heaven, and on earth only one *Ta-whang-te*, is the fundamental principle of their administration. When any mission or embassy arrives from a foreign court, the people are told that it is for the sole purpose of conveying tribute and homage to the celestial emperor. The individuals composing Lord Macartney's mission were not a little disconcerted by seeing a placard to this effect affixed to the barge in which they were conveyed up the Peiho; though, on reflection, they judged it inexpedient to notice the circumstance. The relation of a parent to his children is another image under which the supreme power of the Chinese monarch is represented. Corresponding with this, the parental authority is uniformly held forth as entirely paramount. A parent may sell his children for slaves; and if he kill them, he incurs only a moderate penalty; but if a child addresses even abusive language to his father or grandfather, he is liable to be put to death.

Although, however, the despotism of China be thus entirely raised above any direct and positive check, it is yet in practice the most mild and protecting of any that exists. The monarch is held within a circle of laws, institutions, and ideas, by transgressing which, he would lose the very basis on which his authority rests. The doctrine, that he is the son and vicegerent of Deity implies that he will use this high descent and power in securing prosperity to the nation over whom he thus holds a higher than earthly sway; and this is so fully recognised, that, even when his people are suffering under evils of nature, famine, earthquake, or inundation, he takes the blame, humbles himself, fasts, and strips himself of his costly attire, as a penitent under whose sins his people are groaning. The paternal character equally implies an anxious concern for the welfare of his people, who, amid the veneration with which they view these relations, are not forgetful of the accompanying obligations, or indisposed to revolt when they suffer severely from the non-observance of them. All prudent emperors, therefore, are at considerable pains to impress the idea that they govern consistently with their lofty pretensions. Above all, usage from time immemorial has established a certain regular system of administration peculiar to China, and which the most barbarous conquerors, after the first license of victory was over, have found it wise to sanction and support.

In this system, the fundamental, and, certainly, highly laudable maxim, has been, to make knowledge the sole ground of official rank and public employment. The examinations for this purpose are conducted with the greatest apparent impartiality, and, as seems to be generally believed, with much real fairness. Strict precautions are adopted for this purpose; such as, that every piece of composition that is to be judged, must be given in sealed and anonymous. There are three degrees, which the missionaries, in lieu of the uncouth Chinese appellations, designate by the European titles of bachelor, licentiate, and doctor. The first seems to be merely preparatory; the second qualifies the successful candidate to enter into the class of mandarins, in which is vested the whole administration of China. The mandarins are divided into nine degrees, rising from the lowest, who are collectors of the revenue, to the highest, who are viceroys and governors of provinces. As usual with the officers of an absolute government, each mandarin exercises within his sphere an authority as uncontrolled as that of the head of the state. His duty is not only to govern the people, but also to preach to them; and much importance is attached to the due exercise of this function. The tenour of the official prelections turns chiefly upon industry, peace, order, and respect to parents, the favourite Chinese virtues; and especial stress is laid upon their duties as faithful subjects and as payers of taxes. A portion of the mandarins are employed in carrying on those examinations according to which the several dignities are bestowed. Those for the lowest degree are conducted by a special class migrating for that purpose from place to place. The second degree must be the result of an examination in the capital city of the province, and under the eye of the governor. The highest rank of *tsintsé*, here translated doctor, must be the result of a triennial examination at Peking. It is considered necessary for all high and independent command, even for the governor of a city of the second or third rank. A few doctors, under the appellation of *han-lin*, obtain superior distinction and respect. According to an established regulation, each individual who attains any of the prescribed ranks in literature is promoted, according to seniority, and as vacancies occur, to the corresponding places in the government; and, though there appear to be many instances of favour, fraud, and even bribery, the general practice is conformable to this rule. Various and strict regulations are also made, to restrain each mandarin within the limits of his duty. No one re

ceives office in his native province, or even in the adjoining one; and the same functionary is rarely continued in the same place more than three years. A triennial survey is performed, and reports are made by the higher officers on the conduct of their inferiors. All these precautions are not, it is supposed, sufficient to guard against much corruption and misgovernment; which, in so extensive a system, may be readily believed, not only from the unfortunate propensity of human nature to abuse power, but from the degraded character which despotism naturally produces in its agents. Yet, that a system which maintains by much the greatest mass of population anywhere united under one government in a state of uninterrupted industry, order, and well-being, should be radically bad and corrupt, seems a very rash and hasty conclusion.

The laws of China have been compiled not with any large or statesman-like views, but with a minute and elaborate care to lay down the various descriptions of offence, and apportion to each a suitable punishment. The cane is the grand instrument of government; and all China has been compared to a school, kept in awe by the rod of a master. For its application, the law specifies two distinct dimensions of length and thickness, and more pointedly fixes the number of blows to be inflicted on the offender. For crimes of a deeper dye than those which the cane can chastise, banishment in different degrees is inflicted; and for those still more flagrant, death is awarded. Mercy, however, may be, and is exercised by commuting punishments of every grade with different sums, according to a schedule, which the law carefully fixes. The Chinese have not improved so far in legislation as to abolish the barbarous practice of endeavouring to extract confession by torture, and that of visiting the crime of the guilty upon his innocent family. The objects of punishment are, generally speaking, reasonable, and resemble those of other civilised nations; but there is an attempt minutely to detail the various shades of guilt, and to fix a degree of punishment corresponding to each, which is vain, and even ridiculous. This detail is peculiarly copious in cases of bribery and corruption, the extensive prevalence of which is thus proved, and at the same time is probably very imperfectly guarded against. The Chinese laws have also the infirmity common to some early codes, of interfering in concerns beyond their province; such as forms, ceremonies, dress, and little transactions beneath the notice of a legislator. The manner in which an inferior bows to, or salutes his superior; the terms of the card written to him; the mode in which it is folded; the ceremonial of visiting, are all fixed by statute. Whether a Chinese sits down or rises up; whether he receives company at home or walks abroad, there is a rule fixed; and the cane is always at hand to punish its violation.

Upon the whole, the police is vigilant and effective; and the laws are certainly not sanguinary; since in 1784, the entire number of persons condemned to death is stated by Amiot at 1384, a number deemed unusually large; yet, at a moderate estimate of the total population, it would not be more than one in 108,000.

The revenue of China is derived chiefly from the land tax, or rather rent; for the sovereign, as in other Asiatic despotisms, is held to be the general proprietor. According to the usual Oriental scale, one-tenth of the produce is levied. There is no lease, but ejection is not usual. The inferior kinds of grain are exempted. The produce is paid chiefly in kind, and is conveyed to Peking in the imperial barges (*fig.* 656.) through the canals and rivers.

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China Barges.

The tax on salt is also very heavy, and its produce reckoned at about a fourth of the land tax; and another fourth is supposed to be constituted by the duties on imports and exports, the transit duties from province to province, and a variety of minor sources. Of the manufactured as well as the landed produce, a portion is paid in kind into the treasury. The only estimate of its amount hitherto formed in Europe is derived from a Chinese Encyclopædia, where it is rated at 12,000,000*l.* sterling, which in Britain might be reckoned equal in value to four times that sum. With such an impost, China would not appear at all heavily taxed according to its population; but there is a question, whether this includes the taxes levied in kind, and if it does not, the heaviest of the Chinese burdens would not be included.

The military force of China has been represented, in regard to numbers at least, as very imposing: it has even been made to amount to millions. Grosier and Van Braam, however, seem to agree in fixing the actual number at about 800,000. The greater part are a mere militia, in which the population, when called upon, are liable to serve. Their appearance (*fig.* 657.) and habits are most unmilitary, and they are scarcely called out unless for purposes of police; to pursue robbers, and pass muster on state occasions. Their paper helmets, wadded gowns, quilted petticoats, and clumsy satin boots, exhibit nothing of the aspect of

war. The Dutch ambassadors remark, that the emperor does not, like other Asiatic princes, surround himself with guards, or maintain, even in the capital, a body of troops for the sup-

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Chinese Military.

port of the throne. Nothing more was observed at Peking than small piquets at the gates and principal stations. The most really effective corps is that of the Tartars, consisting of light cavalry, who fight with the bow. Mr. Barrow, however, does not doubt that 20,000 disciplined European troops might march from Peking to Canton, without meeting any serious resistance. It appears from ancient records that the Chinese and Tartars made use not only of gunpowder, but even of something resembling cannon; but artillery does not at present constitute any part of the effective force of the empire.

The Chinese government have, as already observed, very numerous barges, for the conveyance of tribute, and other accommodations; also a few armed vessels to suppress smuggling and piracy; but nothing which can be called a navy. An American frigate would beat the whole of their maritime force.

SECT. V.—*Productive Industry.*

No nation is so famed for industry, in all the arts that minister to human subsistence. The lands, in particular, which are at all capable of culture, are tilled with a minute care, without example among any other people. The peculiar importance attached to agriculture is testified by an annual festival, in which the emperor exhibits himself to his subjects guiding the plough. It is not, however, supported by any large application of skill, science, or capital. The Chinese carry on farming on a small scale, with rude instruments, and almost no cattle. Their chief exertions are employed in irrigating their fields; and by the aid of the chain pump, they draw water out of their numerous rivers and canals, and inundate the crops of rice as soon as they are sown. This is done twice a year, and two crops are in general raised annually, without intermission or rotation. The highest mountains are formed into terraces, so constructed as to retain the requisite quantity of water, and allow what is superfluous to pass; and reservoirs are formed on the summits. The Chinese steep the seed-corn in liquid manure, and use the drill husbandry in order to avoid the waste of seed in broadcast; and the crop, when reaped, is placed on bamboo frames, and carried home on men's shoulders. Great care is also taken in transporting soils, and tempering them by mixture with those of an opposite character, as sand with a thick and adhesive clay, and marl with soils that are too light. But the Chinese are, above all, noted for their expedients in collecting manure, which, from the small number of cattle employed, is an object of great scarcity. Substances are appropriated to this purpose which are never thought of elsewhere. The urine of men and animals is most sedulously collected; to which is added human hair, all sorts of decayed herbs, with every offal and refuse which the strictest scrutiny can discover in the corners of streets and cities. As this manure, however, is little required on the inundated lands, it is in a great measure employed in raising culinary vegetables, particularly a species of brassica, called *petsai*, or white herb, which forms a favourite article of food with the Chinese.

A grand and peculiar object of Chinese industry is the tea plant. It flourishes on the hills of southern China, chiefly between the tropic and the latitude of 30°. It is a bushy shrub, somewhat resembling the rose or myrtle tree, and which shoots leafy branches almost from the bottom of the trunk. The plants occur wild; but when cultivated, they are set in rows, four feet from each other, and, for the convenience of collecting the leaves, are artificially prevented from rising beyond a certain height. Whether the green and black teas be the produce of different species of plants, is a question discussed in the section on Chinese botany. The black teas grow chiefly in Fo-kien, and part of Canton; the green, in the more southerly districts of Kiang-nan, Kiang-si, and Tche-kiang. They are raised in elevated and hilly districts, and generally in small compartments, like gardens. The earlier the leaves are plucked they are the more valuable and highly flavoured, though, of course, the produce

is smaller. In black tea, a few leaf-buds plucked early in the spring constitute pekoe. The successive later pluckings form the congou, souchong, and, lastly, bohea. Green tea is similarly divided into gunpowder, imperial, hyson, and twankay. The leaves are rolled into the usual form by being passed through the fingers of a female, and then dried on thin earthen and iron plates over a charcoal fire. The merchants arrive at the end of harvest, give it a second drying, separate the different qualities, and, after packing it in large chests, convey it to Canton.

Among other important agricultural products is the sugar-cane, which appears to be taller and more juicy than that of the West Indies; but, as it is cultivated on the same small scale as all other articles, single proprietors cannot bear the expense of a mill on their grounds. The cane is boiled, and its juice expressed by migratory dealers, who bring machinery of a character very inferior to that used in our plantations, yet sufficient for its purpose. Mulberry trees are necessary for the production of silk, the staple manufacture of the empire. These trees, which do not appear to differ from those of Europe, are reared with the greatest care, in rows ten or twelve feet asunder, and on beds of a moist loamy earth. They are frequently pruned or dwarfed, in order to make them produce young shoots with tender leaves, which are supposed to be much more nutritious than those upon older branches. The insects are nursed in small houses erected in the heart of the plantations, in order to be removed from all noise; for the Chinese have an idea that they will be injured even by the barking of a dog. After the silk is wound off, the aurelias become an article of food. That no ground may be lost, the intervals between the trees are planted with rice. Cotton is raised in the middle provinces in large quantities, yet still not sufficient to dispense with importation from Bombay. Tobacco is largely grown and consumed; and we may also mention camphor, ginseng, and a variety of leguminous plants.

As a manufacturing people, the Chinese are also eminent. The fabric of porcelain, so superior in beauty to every other species of earthenware, originated entirely with them; and, though the taste of their imitators in Europe has produced more elegant patterns, they are still unrivalled as to its whiteness, hardness, and the transparency of the colours; the materials of which they possess a peculiar art in extracting from a vast variety of animal, vegetable, and mineral substances. Silk also is a fabric which the western world has learned from the Chinese; and the silks of China are still unequalled as to richness, though in Europe they are considered too heavy; and those of France and Italy are preferred. That light and elegant cotton stuff which we call nankeen, derives its name from the great Chinese city where it is manufactured, and the cotton which grows in the neighbouring province is said to have naturally the yellow colour peculiar to it; but Mr. Barrow informs us, that this colour is not worn by the Chinese themselves, and that blue, black, and brown, are preferred by them. The Chinese ornamented papers, so much admired in Europe, it is unnecessary to describe. Their lackered ware would be highly distinguished, were it not here eclipsed by that of their Japanese neighbours. A number, however, of little ornamented trinkets and toys are made with the simplest instruments, and by the hands of single individuals; yet with a beauty which we in vain attempt to rival. Such are their ivory fans and baskets; their ornaments of tortoise shell and mother of pearl; their silver filigree and lackered cabinets, chests, &c. Their paper and printing are both good, and their ink, for some purposes, superior to European.

Trade must be considerable in a country so extensive, and abounding with so many valuable commodities; yet it has the peculiarity of being almost wholly internal. China supplies within itself nearly all the commodities which minister either to the use or the pleasure of her inhabitants. Her foreign trade is permitted only at two points, and under the narrowest restrictions: and though it be considerable to the nations with which it is carried on, by China herself it is scarcely felt as a national object. Another great commercial want in China is that of a moneyed interest. Capital is so scarce, and so little feeling of security exists, that money is lent only on pawn; and, in that case, government restricts the interest to three per cent. per month, above which rate, of course, it must have a tendency to rise. Such a deficiency, in a country so wealthy and a people so industrious, seems to imply in this boasted administration some radical defect, some want of protection for all fortunes that rise above the humblest mediocrity. There is no system of credit established between the merchants of distant provinces, no bills of exchange; no circulating medium, except a copper coin of the value of the third of a farthing. In this respect China yields greatly to India, which, amid all its political agitations, has formed a great moneyed and banking interest, comprising some individuals of immense fortune.

The commerce of China is thus chiefly confined to the operation of bartering the productions of its different provinces; and these are sufficiently various to afford room for a very extensive traffic. The most ample facilities are afforded by the great rivers and their numerous tributaries, and also by the canals, which are constructed on a greater scale than in any other country. One of the great objects is the conveyance to the capital of the imperial land-rent, which is paid in kind, and consists chiefly of rice. Van Braam was told, that the barges engaged in the conveyance of it amounted to 9999, which, with the Chinese, is an

even number, and that there were 200,000 sailors employed, who worked much more at their ease than the rest of the nation. Salt is a most extensive article. The British embassy found, at Tiensing, piles of that commodity, which they calculated at 600,000,000 pounds. It had been brought from the southern coasts of Fo-kien and Tche-kiang, where it had been evaporated by the heat of the sun, for the consumption of Pechelee and the northern provinces. The conveyance of coal, turf, and other fuel, affords also occupation to numerous barges. The distribution throughout China of the silks, porcelain, and other fine manufactures of the central provinces, affords another source no less ample.

Of the foreign commerce of China the European part is the most considerable, and is chiefly in the hands of the English, being conducted by their East India Company, to the exclusion of private traders. They maintain a factory, in which are employed twelve supercargoes and twelve writers, with some subordinate officers. The first two classes rise by seniority; and the three senior supercargoes, called "the Select Committee," have the supreme direction both of trade and political transactions. Their dealings are carried on entirely with the hong merchants, who are required to give security to government for the payment of the import and export duties on the cargo of every ship that arrives in any Chinese port, and for the good conduct of the crew. There are, however, others, called "outside merchants," many of whom, under sanction of the hong, carry on traffic to a great extent. Tea has been almost the exclusive article of export by the Company since 1824–5, previous to which they used to export a considerable quantity of raw silk. In 1828–9, the export consisted of 28,617,280 lbs., besides, 1,229,954 exported to the British North American colonies. The invoice value amounted to 1,981,419*l*. The imports by the Company consisted chiefly of woollens, the amount of which had fallen from 832,160*l*. in 1813–14, to 459,553*l*. in 1828–9. The other articles consisted of cottons, glass, iron, lead, which had fallen in the same period from 163,209*l*. to 124,098*l*. [By the act of 3 and 4 Will. iv. c. 93 (Aug. 28, 1833), the trade between Great Britain and China is thrown open to all British subjects, and now stands on the same footing as that with other countries. The gradual decline of the Company's imports has been already adverted to; but it should be added, that, beside the falling off in the value of the merchandise above stated, the import of bullion, which at the period of 1814–1816 was about 600,000*l*. annually, had totally ceased in 1828–1830. The Company's exports of tea, during the last three years of their charter, hardly averaged 31,500,000 lbs. a year; but during the first year of the free trade (1834–5), the exports in British ships exceeded 42,000,000 lbs. The total value of the Company's imports into China from Great Britain, during the last few years of their existence, did not average 600,000*l*. a year; that of their exports from China to Great Britain averaged 1,850,000*l*. The British trade in Canton is now placed under the supervision of an officer, appointed by the crown, and styled the Superintendent of the Merchants. The Dutch trade is the largest of the European nations after the British; but even with the assistance of protecting duties in Holland, the Dutch cannot withstand the enterprise and activity of the American traders.—AM. ED.] Though the Portuguese possess the island of Macao, and the Spaniards from the Philippines have access to the port of Amoy, they make little use of these advantages. The French, Swedes, and Danes all carry on a little intercourse with Canton.

The trade to China from India, where it is called the country trade, is almost entirely free, and has been carried to a great extent. It is chiefly with Bombay, which sends to it cotton, and the fine opium of Malwa; while from Calcutta it receives the inferior opium of Patna and Benares. The import of this article into China has increased surprisingly, from a value of 590,000*l*. in 1817–18, to 2,500,000*l*. in 1831–32. It has grown also in the face of the most rigorous prohibition, and by trade entirely contraband. This is carried on in the bay of Linting, with perfect security, by means of very slight precautions. Cotton, which used to be the largest article, fell during the above period from 1,310,000*l*. to 646,000*l*. Tin, pepper, betel-nut, and some other articles, raised the imports from India to China, in 1831–32, to 3,250,000*l*.

The American trade with China has also, within the last fifty years, risen to very considerable importance. It commenced in 1783, with a single vessel from New York, and in 1833, it had increased to a total value of $16,735,150; viz.: $8,372,178 of exports from Canton, and $8,362,971 of imports into that port. The Americans export from China tea to the extent of nearly 15,000,000 pounds, nankeens, silks, and other minor articles; and give, in return, furs, chiefly from the north-west coast of America, seal-skins, Turkish opium, ginseng, sea-slug, woollens and cottons of English and American manufacture, and a balance in bullion.

The foreign trade of China in her own bottoms, though bearing no proportion to the wealth and greatness of the empire, is not altogether inconsiderable. It is carried on in large unwieldy junks, whose structure can never be improved, as the slightest deviation from their present clumsy structure would subject the owners to the high duties imposed on foreign merchants. The viceroy of the provinces fixes the number of junks that shall sail to each particular country, and the species of cargo which they shall carry. Mr. Crawfurd reckons that there sail annually to Japan ten junks, making two voyages; thirteen to the

Philippines; four to the Sooloo isles; thirteen, Borneo; two, Celebes; seven, Java; ten, Sumatra; nine, Sincapore; six, Malacca; eighty-nine, Siam; twenty, Cochin-China; nine, Cambodia; twenty, Tonquin: in all, 222; which, with a number of smaller ones, make the tonnage of the celestial empire about 80,000.* These vessels are partly built and owned in foreign countries, but by Chinese natives. They have numerous owners, each of which has a compartment divided by strong planks from the rest of the vessel. In return for the staples of China, they receive gold, tin, and the gelatinous substance called sea-slug, and a peculiar species of birds'-nests, which, when made into soup, are reckoned peculiarly delicate and nutritious.

[The over-land foreign trade of China, carried on by caravans, is also extensive. The principal stations for this trade are as follows: Maimatchin, opposite to Kiakhta on the Russian frontier, where the value of the merchandise imported and exported, is about $2,000,000 annually; Yarkand and Cashgar, near the frontiers of Bucharia; Leh, or Ladak and Lassa, in Thibet, for the over-land trade with Hindostan; Yongtchangfou in Yunan, near the Birman frontier; and Koeilinfou, near that of Anam.—Am. Ed.]

The fishery that exists in China is inconsiderable in a national or commercial point of view; but, as the means of individual subsistence, no nation carries it to such an extent. All the lakes, broad rivers, and sheltered bays of China are covered with floating cities, the crowded population of which have no home but on the water. Staunton and Barrow suppose that the waters of China are as densely peopled as the land, and that they sustain a floating population equal to that of the whole British empire. Chinese invention has discovered modes of ensnaring the finny tribes quite peculiar to itself. One most singular resource consists in the employment of the fishing-bird, a species of cormorant, which dives into the water, seizes the fishes with a long bill, and brings them to its master, accepting in recompense such portion as he chooses to bestow. Others fasten to the side of the vessel a board painted white, which, by moonlight, has the appearance of glittering waves, and attracts the unwary tenant of the stream. Many, also, of the owners of these watery mansions keep large flocks of ducks, which go out and return, obedient to a signal. In some of the still waters are to be seen floating islands, composed of broad rafts on which houses are built, and some parts are even laid over with earth, and crops raised upon them.

In public works, undertaken for purposes of utility, China stands without a rival. Ancient Egypt, indeed, exhibits monuments of equal labour; but these were mere displays of vain and superstitious pomp, and cannot come in competition with those canals which form the foundation of the prosperity of China. The labour and ingenuity are the greater, as they are seconded by little science; for the Chinese are unacquainted with the construction of locks, or other means by which a stationary supply of water can be ensured. Their canals are merely artificial rivers, formed by changing the direction of those constructed by nature. By that called, emphatically, the Great Canal, an uninterrupted communication of 500 miles is maintained between the Peiho, or river of Pekin, and the great central stream of the Yang-tse-kiang. A considerable river is arrested as it flows over the high land of Shantang, and the divided stream, turned into opposite directions, forms the basis of this great watercourse. In connection with the rivers, this canal completes, with only one short interruption, a line of 1000 miles of navigation from Pekin to Canton. On the other hand, the roads are narrow, and unsuited to vehicles of any magnitude; there being little ground to spare, and cattle being equally scarce. The only mode of travelling in state is in palanquins, which, as well as the baggage, are conveyed on the backs of coolies or porters, 1000 of whom, at a period when the Great Canal was frozen, were employed in carrying to Pekin the presents of the Dutch ambassadors. Ordinary goods are conveyed by double barrows, forming a small cart, the movements of which are produced, when wind favours, by the use of sails similar to those of a boat. The narratives of the late embassy occasionally mention the passage of whole fleets of wheelbarrows. This practice is noticed by the old travellers, and, on their testimony, by Milton, in his allusion to

> "Sericana, where Chineses drive
> With sails and wind their cany wagons light."

Among the mighty works of China, may here be mentioned the Great Wall, though it was constructed entirely with a military object. Perhaps it is unrivalled among the productions of human labour. The wonder is not merely in the continuity of the rampart for upwards of 1000 miles, but in the difficulties which have been surmounted in carrying it over so rugged and mountainous a country. One elevation, near the place where the British embassy passed, was calculated at upwards of 5000 feet. It was seen, however, extending along the ridges of hills, over the tops of the highest mountains, crossing the deepest

* [Mr. Crawfurd, however, adds that he has no means of describing the extent of the traffic between China, and Corea and the Loo Choo islands.—Am. Ed.]

valleys, continued upon arches over rivers, and doubled or trebled in many parts, to take in important passes (*fig.* 658.). Its usual height is thirty feet, though a smaller and even half that elevation suffices where it is carried along declivities. The top is paved, and so broad that a carriage can drive along it. Square towers, sometimes forty feet high, are erected at very short distances. Mr. Barrow observes, however, that this huge work implies no display of skill, either in architecture or military defence. It is merely a mound of earth heaped together, and faced with brick or stone, similar to the walls with which all the cities of the Chinese are surrounded. Their history describes it as completed in the third century, but without mentioning the period of time employed in its construction. As a defence against invasion, on a great scale, such barriers have always been found nugatory; but this was probably useful in repelling the predatory inroads of those little wandering tribes who filled a great part of the surrounding deserts. Since the Tartar conquest, which incorporated them all into the Chinese empire, its use is no longer felt, and by the Chinese themselves it is now little regarded.

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Part of the Great Wall of China.

SECT. VI.—*Civil and Social State.*

One of the most remarkable features of China is its population, which is certainly much the greatest that is in any part of the world united under one social and political system. It is, however, a subject which has afforded no inconsiderable scope for doubt and controversy. Lord Macartney's famous number of 333,000,000, though stated to him on official authority, which he considered respectable, is now discredited. On the other hand, some old enumerations, which make the amount only 50,000,000 or 60,000,000, are confessedly imperfect. One of the best authorities is that of the *Yetungshe*, a sort of encyclopædia, which rates the number of families paying taxes at 28,514,488; which, at five to a family, would give an entire population of 142,000,000. An addition being made, including the privileged classes, those living on the water, and others variously exempted, may raise the total to upwards of 150,000,000. This agrees pretty closely with an enumeration communicated by Dr. Morrison, as made by the present emperor, which amounted to from 145,000,000 to 146,000,000 *mouths*. On the other hand, statements reported by Father Allerstein in 1743, and by Grosier in 1760 and 1761, agree in making the number 196,000,000 or 198,000,000. All these are probably very vague; especially as, when they come to the detail of the provinces, they exhibit the most complete discrepancies from each other. On the whole, we cannot persuade ourselves that the population of China is materially under 200,000,000. China is eight times the extent of France: it is more fruitful, more carefully, though perhaps not quite so skilfully, cultivated. An equal density would give 230,000,000 or 240,000,000; and really it does not seem likely to be much inferior. Loose as this mode of estimate is, it is probably better than enumerations which are proved to be vague by their contradictory character.

The whole of this immense multitude composes, in the strictest sense, one people, cast in one mould, both of form and mind. Their external aspect (*fig.* 659.) marks them generally

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Group of Chinese.

as belonging to the Mongol race, and seems to indicate them as having originally come across the high pastoral table-land of middle Asia. It has been softened down, however, by pacific and regular habits, as well as by some features strictly Chinese. "The broad,

irregular, and half-closed eye; the linear and highly-arched eyebrow; the broad root of the nose; the extension of the upper eyelid a little beyond the lower; the thin straggling beard, and the body generally free from hair; a high conical head and triangular face," are given as their peculiar characteristics. Their complexion is of a sickly white, or pale yellow, like that of a faded leaf, or the root of rhubarb. Their hair is universally black, and if it fail at all in that colour, the defect is supplied by painting: it is so thick and strong, that they compare that of Europeans to the pile of the finer furs. They are generally of the middle size; few tall men, and still fewer dwarfs or deformed persons are found among them. The female sex were seen with difficulty, and almost only those of the lowest ranks, who were not distinguished from the men by any delicacy of feature or complexion; on the contrary, their persons were pronounced by Mr. Hickey the reverse of what is generally considered as elegant or beautiful. Mr. Barrow also observed, that the air of good-humour, which appears in the visage of the male Chinese, is exchanged in that of the females for one of fretfulness and discontent; which, perhaps, is but too well justified by the tyrannical treatment which they experience. The few, however, of the higher ranks who presented themselves to the view of the English embassy made a much more favourable impression; and, from the delicacy of their complexions, and the regularity of their features, appeared entitled to admiration (*fig.* 660.) The same judgment is warmly pronounced by the Dutch ambassadors, who appear to have made very diligent observations upon this subject. One somewhat dishonest cause of the difference here perceptible is found in the trade which prevails in China, of purchasing, at an early age, girls who afford any promise of beauty, and training them for the future wives and concubines of the opulent classes.

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Mandarin and Ladies.

The national character of the Chinese has been very differently regarded, and perhaps there has of late prevailed a disposition to rate it somewhat too low. Quietude, industry, order, and regularity,—qualities which a despotic government seeks always to foster,—seem to be peculiarly conspicuous. A general good-humour and courtesy reign in their aspect and proceedings: even when they jostle and come into collision with each other, the extrication is effected without any of that noise, and exchange of turbulent and abusive language, which are but too often witnessed on such occasions in European cities. Flagrant crimes, and open violations of the laws, are by no means common. The attachments of kindred are encouraged and cherished with peculiar force, particularly towards parents and ancestry in general. The support of the aged and infirm is inculcated as a sacred duty, which appears to be very strictly fulfilled. It is surely a phenomenon in national economy very worthy of notice, that, in a nation so immensely multiplied, and so straitened for food, there should not be such a thing as either begging or pauperism. The wants of the most destitute are relieved within the circle of their family and kindred. It is said to be customary, that a whole family, for several generations, with all its members, married and unmarried, live under one roof, and with only two apartments, one for sleeping, and the other for eating; a system, the possibility of maintaining which, implies a great degree of tranquillity and harmony of temper. Within the domestic circle, however, and that of ceremonious social intercourse, seems to terminate all that is amiable in the Chinese disposition. In every other respect they show no interest in the welfare of their fellow-creatures, nor even the common feelings of sympathy. Repeated instances have occurred of Chinese dropping into the sea, and being rescued by the English, while their own countrymen did not take the least notice, or make a single effort to save them. Their propensity to fraud has been amply noticed by travellers, but appears to have been somewhat exaggerated. To the hong merchants belongs the merit of having established a character of very strict honesty; and many even of what are called "outside merchants" appear to be highly respectable. The custom of the Chinese to write upon their signs, "Here no one is cheated,"—though we might be rather rash in concluding, with De Pauw, that it implies a predetermination to cheat all the world, manifests pretty clearly that the thing is considered neither unprecedented nor improbable. The want of all independent place and power, the abject submission required, and the application of the rod to all classes alike, produces a general degradation of character, and the vices which are its natural consequences. The highest officers of state showed an entire disregard of truth, and hesitated not to utter the most glaring falsehoods, whenever a political purpose was to be served. Again, the practice of exposing children is another repulsive characteristic of the Chinese, which har-

monises very ill with their apparent mildness, and boasted respect for the ties of kindred; nor can the poverty which prompts it form its excuse. In Peking, where it most prevails, the number of children annually exposed, has been stated at 9000; but this is now admitted to be a great exaggeration, and the real number cannot be well guessed. The practice derives no palliation from being exercised chiefly upon the female sex, in consequence of the low estimation in which they are generally held in China. According to the Dutch ambassadors, females in that country may be considered universally as objects of traffic. Those who promise to be handsome are purchased in early youth by the class of dealers above mentioned, and trained for the harems of the great, where they pass the rest of their days, according to Eastern custom, in splendid seclusion. The confinement, if less rigorous than in some other of the Asiatic states, is yet strictly ensured by an infirmity arising out of the fantastic taste which prescribes, as indispensable to female beauty, that the feet be reduced to the most minute possible dimensions (*fig.* 661.). This, by compression from an early age, is effected to such an extent, as to leave them barely able to totter from place to place, holding by the wall or other supports. The lower ranks, on the other hand, after being purchased by the husband, are treated almost as slaves, and subjected to the hardest labour: they have even been observed by travellers yoked to the plough.

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Chinese Lady's Feet.

In regard to religion, China has none connected with or supported by the government. No creed is made a matter of state, except the abstract belief in the existence of a Supreme Being, and of the emperor as his sole vicegerent on earth. As to every further creed and rite, the nation adopts any or none, as it may judge most expedient. The learned, indeed, generally affect indifference upon this subject, and limit themselves to the above simple belief, joined to a superstitious reverence for ancestry and for the ancient sages of the empire. The people, however, require some more sensible objects of worship; and the vacant place has been chiefly occupied by the sect of Fo, essentially the same with that of Boodh, which rules in Thibet, and has spread thence through all the neighbouring regions of Tartary. It appears there with its doctrine of transmigration, its numerous images, its monastic institutions, its bells and beads, its noisy music, and its peculiar dress; all giving it such a resemblance to the Catholic worship, that the missionaries of the church of Rome fill their journals with perpetual lamentations on the impossibility of distinguishing the two. Although jealous, in general, of every foreign system, the Tartar dynasties have been inclined to protect this religion of Tartar origin. The same favour has not been extended to Christianity, which has repeatedly made some progress. The Jesuit missionaries, in particular, have always rendered themselves necessary at court by their knowledge, contrasted with the Chinese ignorance of the astronomy requisite to predict eclipses, and to form a correct calendar. As soon, however, as conversions began to be effected, complaints were always preferred, that the new sect were changing the customs, and even the fundamental principles, of the empire. The prohibition of the almost divine honours paid to ancestry; the congregational meetings attended by females, and the representing celibacy as a meritorious state, were the points of objection most forcibly dwelt upon. Repeated persecutions have, in consequence, taken place, by which this faith has been almost entirely extirpated. Such also has been the fate of Islamism, though there are still mosques in some of the principal cities. The superstitions usual among the vulgar in all countries prevail also in China; as witches (*quey-shir*), good and evil supposed to be locally attached to particular spots, lucky and unlucky times. In the ports on the ocean, pagodas were found chiefly erected to a mysterious being called the "King of the Eastern Sea;" a worship obviously suggested by the grand object which nature there presented to them.

Learning, in China, must form a leading pursuit, and might be expected to be found in a very flourishing state, since it is held in almost exclusive honour, and forms the sole road to rank, distinction, and power. Yet this very circumstance is perhaps the cause of the limited and stationary state in which it actually exists. When science becomes a state engine, any change in its nature or extent becomes a political innovation, which the jealous character of despotism will never tolerate. The language, arrested probably by this cause at an early stage, requires alone the laborious application of years; after which the laws and history of the empire, and the precepts of its ancient sages, seem nearly to fill up the routine of official study. Mathematics and astronomy, which have been often cultivated with the highest success under absolute governments, have not, in China, reached beyond their most elementary forms. The Court Calendar, published for the guidance of the nation in various important concerns, has for a long time been constructed by foreigners; Arabs, Hindoos, and even Europeans. Notwithstanding, also, the paramount importance attached to objects of utility, the Chinese have made no progress in the application of the mechanical powers:

they cannot even construct a common pump; and all their great works are the mere result of indefatigable labour performed by a multitude of human hands.

The Chinese language, arrested between hieroglyphical and alphabetic writing, presents a singular phenomenon. The simple picture of the object, which appears in some of the early writings, has been changed, for facility of writing, into the letter; but the next step, which should have been to make each letter express a simple sound, and thus a small number by repetition represent all the words in the language, has never been taken. Every word, or rather every idea, continues to be represented by a separate character; and such characters, in the most copious Chinese dictionaries, amount to no less than 40,000; a much greater number than there are of words in any of our languages, where many expressions represent several ideas, the context explaining the one meant in each particular case. In China, each character represents the one single and separate idea. This copiousness becomes the more remarkable when contrasted with the peculiar poverty of the spoken language. This last consists altogether of monosyllables; and as they want, moreover, the letters *b*, *d*, *r*, and *x*, they have not been able to form more than about 330 syllabic sounds. These, by accents and peculiar intonations, are multiplied to about 1300; still there remain about thirty written words to every spoken word. The latter afford thus an exposition of the written words, and, without reference to their sound, form the proper Chinese language. Europeans long looked with despair upon this chaos of characters, to learn the whole of which seemed the work of a life. It now proves, however, that a clue exists by which they may wind their way. Experience discovered first 473, and then 214 particular forms, one or other of which appears in every Chinese character. These, by the natives are called the eyes, by Europeans the keys or elements, of the language. Dictionaries have been constructed, by means of which the whole language has been arranged under them as with us under letters; and such facilities are thus afforded, that Europeans, in the course of two or three years' study, have been able to translate works from the Chinese.

The literature of China appears to be extensive, though little known to Europeans. The perusal of written books, being the high road to honour and distinction, becomes a fashionable and favourite occupation with all classes. No nation of Asia can boast of such a mass of historical annals; but, though these are compiled with care, they evince not that philosophical spirit and fearless research which give lustre to the great historians of the West. The works on laws and on statistics are also very extensive. Like those on history, they are composed by the han-lin, or doctors of the first class, and are sent as presents to the great mandarins. For the amusement of the people, there appear in quick succession sundry dramas, poems, and tales, a few select specimens of which have lately been translated. The state of subjection in which the people live, and the narrow circle of their ideas, are unfavourable to any lofty flights of original thought; but their writings are often judicious, pleasing, and natural. Many of their poems are didactic, composed of short maxims or sentences; and the incidents in their stories are chiefly of a domestic nature. Printing was practised in China long before it was known in Europe; not, however, by employing moveable types, which would be ill fitted to represent their innumerable characters; but by cutting these characters out of wooden boards, of which, consequently, there must be one for each page. The missionaries, however, by taking the keys instead of letters, have succeeded in printing according to the European style.

Theatrical exhibition, in its various shapes, appears to be a favourite Chinese amusement. Mr. Barrow heard, that there were in Peking about 100 companies, each consisting of 50 persons and upwards, conveyed from place to place in passage-boats. They perform not, as in Europe, to crowded and public audiences, but are sent for by the rich to act at their own houses. The foreign ambassadors have not, upon the whole, been very much edified with those presented for their entertainment. The Dutch declare that the spectacles exhibited for the entertainment of the court of China would not have attracted an audience in Europe at a country fair; and Staunton remarks on the grotesque nature of the exhibitions, and the presentation of scenes which taste and delicacy would have elsewhere withdrawn from the public eye. It is to be observed, however, that the selection of objects of mere show and buffoonery was the only way in which those could be amused who knew nothing of the language. Recent research has made us acquainted with dramas having a regular plot, and by no means destitute of interest and character.

The fine arts, in China, are deficient. Her painters, indeed, can express with minute accuracy the forms and colours of natural objects; and can produce, on the whole, a light and pleasing effect. Being wholly ignorant, however, of perspective, and of the distribution of light and shade, they can accomplish no effects of foreshortening or distance; neither can they imitate that depth and blending of tints which nature actually presents to the eye. They give groups of individual objects; but not a picture. Their music, notwithstanding the mighty effects which they ascribe to it, is, in fact, still more defective. It is perfectly simple, and has been compared to the Scotch, but without possessing its plaintive tenderness.

In the architecture of the Chinese, there is little either of elegance or of that magnifi-

cence which we denominate Oriental. The most solid material is half-burnt brick; and the mansions of the highest as well as the lowest are formed on the model of the primitive Tartar dwellings; but, even in the great cities, a traveller might fancy himself, from the low houses with carved overhanging roofs, uninterrupted by a single chimney, and from the pillars, poles, flags, and streamers, to be in the midst of a large encampment. The fronts of the shops are covered with varnish and gilding, and painted in brilliant colours. The external splendour of the palaces and pagodas consists merely in coloured varnish and gilding. The rooms, even those occupied by the emperor, are small, and little ornamented. The Dutch embassy was received by him in an apartment only ten feet square. There are, however, a number of large halls (*fig.* 662.), like galleries, for festivals and public occasions.

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Hall of Audience in China.

The gardens of China have been celebrated, and are constructed on an opposite principle to ours. With the view of escaping from the monotony of a country entirely subjected to art and culture, the Chinese seek to exhibit the wildest and rudest aspects of nature; lakes, dells, hanging woods, and natural forests. In the great imperial gardens (*fig.* 663.) of Yuenmien and Zhehol, where an extent of country is ornamented in this manner, a great deal of really fine scenery is included. In private gardens, on the contrary, where objects of which the value depends on their grandeur are attempted to be comprised within a space of one or two acres, a ludicrous effect is often produced.

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Imperial Gardens.

The Chinese are more completely and substantially clothed than the other nations in the south of Asia. The men wear long gowns and petticoats, which would give them a feminine appearance, did they not add boots; while the women, with short jackets and trousers, might pass for men, but for the elegant ornament of braiding their hair with flowers. Silks, satins, and occasionally fine cottons, form the material of dress for the higher ranks: the lower are clad in coarse cottons. The button forms the attribute of rank, and by its various shapes and sizes expresses at once, to a Chinese eye, the dignity of the wearer.

The Chinese differ from the other Orientals in their food, and in the mode of taking it. Instead of squatting on the floor, and eating with their fingers, they sit on chairs, eat off tables, and raise the food to their mouth with a species of chopsticks. Their dishes are placed on small tables, but piled in successive stages over each other. They consist, in a great measure, of confections and fruits, the latter of which are iced. One favourite luxury of the rich consists of soups made with the gelatinous substances, sea slug, birds'-nests, &c., imported from the East India islands. The mandarins live luxuriously, and have several meals a day, with numerous dishes at each. The ordinary Chinese can have only rice, with a little seasoning; but they eat heartily of it, and scarcely any thing, Mr. Barrow says, puts a Chinese out of humour, except being interrupted at his victuals. Tea is the well-known universal beverage, presented at and after meals, and on all occasions. It is drunk without cream or sugar, hot water being poured over the leaves. Their wine is bad, but they have an ardent spirit distilled from grain, of which they sip pretty largely in private. Even convivial excesses occasionally take place.

SECT. VII.—*Local Geography.*

Having thus completed the general survey of China, its details will not detain us long; since, though vast, they present a monotonous uniformity, and do not, at any point but one, come in contact with European connexions and interests. [China Proper, including a small part of Little Bucharia, is at present divided into 18 provinces, the division, as commonly given in maps, being the old distribution, established under the Ming dynasty. The provinces are subdivided into cantons (fou); these into departments (tcheou), and these last into districts (hian). Some of the departments and districts are not dependent upon any canton, but are administered directly by the provincial government; these are called (tchele). The Chinese cities have no proper name, but are mostly designated by the name of the division,

of which they form the capital; thus the city of the province of Quangtong (Canton), &c. The actual residence of the court is called King-sse, the Capital, if there are several, or if the court has changed its residence, they are distinguished by the designation of their relative position; as Peking, Northern Court or Capital; Nanking, Southern Court, &c. The following table exhibits the area of the provinces from Macartney, and their population according to M. de Rienzi.

Provinces.	Area, in Sq. Miles.	Population.
Tchele, or Petchelee	58,949	3,402,000
Shansee, or Chansi	55,268	1,920,000
Shensee, or Chansi	154,008	3?2,000
Kansou, part of Shensee, and part of Little Bucharia	———	840,000
Setchuen	166,800	7,813,000
Yunan	107,969	3,209,000
Guangsee	78,250	3,081,000
Quangtong	79,456	3,604,000
Fokien, or Footchien	53,480	2,312,000
Tchekiang	39,150	18,975,000
Kiangsou, Anhoei } Kiangnan	92,961	28,853,000 / 1,148,000
Shantung	65,104	24,841,000
Honan	65,104	2,614,000
Hoopee, Hoonan } Houguang	144,770	24,132,000 / 10,000,000
Kiangsee	72,176	28,853,000
Koeitchoo	64,554	2,018,000
Total	1,297,299	145,271,000

Am. Ed.]

We shall begin with the province of Petchelee, the most northerly, and, though not the finest, yet distinguished as containing the capital of the empire. Its elevation, as well as its position, combine to render the climate comparatively cold; ice prevails for three or four months in the year; the sea-coast is marshy; and, instead of rice, wheat and barley, the species of grain that belong to the temperate climates are chiefly raised. The Tartar frontier presents mountains of considerable height, over which extends the Great Wall.

Peking (*fig.* 664.), the celebrated capital of this great empire, stands almost in a corner of it, only forty miles from the Great Wall. It consists of two very distinct parts, the Chinese and the Tartar cities, of which the former is the most elegant and populous, but the latter is adorned by the imperial palace and gardens. The united city is about twelve miles in circumference, surrounded by walls, like every other in China; but those of Peking are peculiarly lofty, and completely hide the city from those who are without. The population has been a subject of controversy. The English embassy calculated it at 3,000,000; probably too high; but Malte-Brun, in calling this "an extravagance more than English," commits, we apprehend, a much greater one, when he says, that this number could not have room to stand upright in Peking. The Russian embassy judged it only double the size of Moscow, and as containing nearly as much unoccupied ground; which would infer only 600,000 or 700,000. But Moscow is built in a very scattered manner, and a much greater number of Chinese are understood to live under the same roof than is usual among the inhabitants of any city in Europe. The estimate of Le Comte, who appears to have studied this subject with particular attention, is 2,000,000; which, perhaps, with a little abatement, may be nearest the truth. Peking is divided into regular streets, the principal one of which crosses the whole city, and is about 120 feet wide, unpaved, but carefully watered. It consists chiefly of shops, which, though, like every other edifice in the empire, seldom exceeding one story in height, are adorned with flags, varnish, painting, and lanterns of a peculiar and elegant construction. The streets are immensely crowded, as the Chinese spend much time in the open air.

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Peking.

Other towns in Petchelee are Tongchoo and Tiensing, the ports of Peking; one on the Peiho, and the other lower down, at its confluence with the Queyho. This last was stated by the mandarins to contain 700,000 souls; an estimate which seemed to agree with the crowds it put forth; and its length is nearly equal to that of London. Paoting, the residence of the viceroy, has an agreeable inland situation in the heart of a fertile district.

Shantung, to the south of Petchelee, is traversed in the west by the Great Canal on its way to the Yellow River, and in the east stretches into a great peninsula. This province

is mountainous; many parts of it are bleak, and thinly inhabited; and, instead of rice and wheat, yield only the inferior articles of d'hourra and millet. Valuable mines of coal are found here, which serve for the supply of the whole empire. Tsinan, the capital, is an ancient city, with the tombs of many kings in its neighbourhood; it has, at present, flourishing manufactures of silk.

Proceeding southwards, still along the Great Canal, we enter Kiangnan, the pride and the boast of China. Here all the grand communications of the empire meet: the Hoang-ho and the Yang-tse-kiang flow into the sea, and are connected by the Great Canal. Mr. Barrow describes with admiration the scene which appeared at their junction:—"the multitude of ships of war, of commerce, of convenience, and of pleasure; some gliding down the stream towards the sea, others working against it by sails, oars, and wheels, and others lying at anchor; the banks on either side, as well as those of the canals, covered with towns as far as the eye can reach; the continuance, along the canals, of cities, towns, and villages, almost without interruption."

Nanking, the ancient capital of China, is, in extent, considerably superior to Peking. The exterior wall, enclosing the suburbs, resembles rather the boundary of a province than of a city. Since the government and tribunals, however, were transferred to Peking, it has greatly declined, and about a third part of its area is now uninhabited. It still continues to be the most manufacturing city of China. Its silks, its paper, the cottons bearing its name, are preferred over the empire to those made elsewhere. Learning also continues to flourish in an unrivalled degree; the booksellers' shops are nowhere so amply furnished; and a greater number of doctors are sent forth from it than from any other city. Nanking contains, also, in its pagoda, or porcelain tower (*fig.* 665.), the chief architectural monument of the empire. It consists of nine stories, ascended by 884 steps. The material is a fine white tile which, being painted in various colours, has the appearance of porcelain; and the whole is so artfully joined together as to seem one entire piece. The galleries are filled with images, and set round with bells, which jingle when agitated by the wind. On the top is a large ball, in the shape of a pine-apple, of which the Chinese boast as consisting of solid gold; but on that point foreign observers seem to be sceptical.

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Porcelain Tower at Nanking.

In this province, also, the traveller who proceeds southward along the Great Canal finds the large and beautiful city of Soutcheoufou, which the Chinese extol as their terrestrial paradise. Branches from the Great Canal traverse it throughout, and render it, like Venice, a city on the waters. The small lake of Taihoo, in the neighbourhood, surrounded by picturesque hills, affords a scene of delightful recreation. Here all the classes whose function is to minister to pleasure, lawful or unlawful, are trained to their respective vocations; comedians, dancers, jugglers, and the females destined to fill the harems of the great. The latter are judged to be fairer and more gracefully attired than those of the northern cities; and paint, both red and white, is lavished to heighten their beauties.

To the south, Kiangnan has on its left the maritime province of Tchekiang, one of the finest in China, and covered in particular with extensive plantations of mulberries. The surface is very picturesque, its rich plains being varied by irregular hills and rugged rocks. It is distinguished by containing the great city of Hangchoo-foo, situated at the point where the Great Canal joins the river Chiang, which here, in approaching the sea, spreads into an ample lake. This is the city described by Marco Polo under the name of Quinsai, as the capital of southern China, and as the most splendid and delightful he ever saw. Even in its present decline, its magnitude, rivalling that of Peking; the varied beauties of its lake, the numerous pleasure parties which cover its surface, the gilded barges, with floating streamers, sailing to and fro, and the aërial pavilions with which its margin is studded, form a magic scene, which acquits of all romance the glowing descriptions of that celebrated traveller.

Kiangsee, to the west of Tchekiang, is a province bordered and traversed by mountains of considerable height; but as these mountains, wherever it is possible, are cultivated to the summit and have many fine intervening valleys, it is almost as fertile and populous as any of the other provinces. It is traversed by the Poyang lake, a noble piece of water, surrounded by mountains of considerable height, whose sides are highly cultivated and peopled. Nanchang, the capital, on a river which falls into it from the south, presents monuments

characterising a city of the first rank, but is now reduced to a state of poverty. Yaotcheou-foo, and several other cities, rise on the borders of the lake. The place most worthy of notice in Kiangsee is Kinteching, which the Chinese, indeed, account only a village, but a village which, according to some, contains 1,000,000 inhabitants. It is the centre of the manufacture of porcelain, and its site is marked by the clouds of flame and smoke which rise from it, and make it appear at night like a great city on fire. No foreigner has ever been admitted into its precincts, lest he should discover the secret of the processes there carried on. A river which falls into the Poyang lake affords the means of exporting the produce of Kinteching, and exchanging it for that of the rest of the empire.

Interposed between Kiangsee and the ocean is the maritime province of Fokien, or Footchien, a region of considerable resort to early European navigators, while the southern ports of China continued open to them. It is now little noticed; but is described as a very fine province, covered with hills, usually such as Chinese industry can cultivate to the very summit. It abounds not only in grain, but in fruit, particularly oranges; and the tea plant is reared on a great scale. Foutcheou, the capital, situated near the mouth of a great river which admits the largest vessels, and is crossed by a superb bridge of 100 arches, makes an ample display of whatever is splendid or beautiful in a Chinese capital. Amoy, on an island upon the coast, affords a very fine harbour, whence the Chinese carry on a great part of their foreign trade.

The southern frontier of Kiangsee is bounded by a lofty and naked barrier of mountains, which interrupts the water communication, hitherto continued from Peking. On the other side is the province of Quangtong, the northern approach of which consists, in a great measure, of naked and rugged mountains, diversified by fantastic rocks, and on many parts of which even Chinese industry can impress only a very limited cultivation. The interior, however, beyond the city of Chaucheou-foo, equals any of the other maritime provinces. It is traversed by the river Pekiang, to which goods, from the great water communication, are conveyed by a land carriage of some days, and which, during a course of 250 miles, is covered with barks transporting merchandise to and from Canton.

Canton (*fig.* 666.), the best known city of China, and with which alone Europeans carry on habitual intercourse, is situated at the confluence of the Pekiang with the Taho, a much larger river coming from the west. Their united streams spread below this city into a broad estuary, called, by Europeans, the Bocca Tigris, which extends about fifty miles in length, and twenty in breadth, to its junction with the ocean. Canton itself is about five miles in circumference; besides which, its extensive suburbs compose, as it were, another city. The great estuary of the Bocca Tigris also is covered with floating mansions arranged in streets, the tenants of which have no home on land. The hongs, or factories, are handsome buildings, situated in the suburbs, and arranged in a line along the water. The streets are narrow, and the front of almost every house is a shop; but the suburbs and vicinity contain many agreeable sites, in which the wealthy inhabitants have erected their mansions. All that has been said of the European trade of China applies to that of Canton, now the sole theatre of this trade; for the admission granted at an early period into Amoy and Limpoo, or Ningpo, has long been withdrawn.

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Canton.

Near the mouth of the Bocca Tigris is the Island of Macao, separated from the continent only by a narrow river channel. It was once a place of high importance, whence the Portuguese, in the days of their pride, carried on most of the commerce between Europe and China. It has more than shared, however, in that supine sloth and decay which have involved all their Eastern empire. The town contains, at present, a population of about 12,000, including about 4000 Portuguese, who still fit out a few vessels, or give their name to those whom it benefits in trading with this jealous government. Thirteen churches, four convents, and fifty secular ecclesiastics, are supported by this decaying town.

West of Quangtong is Quangsee, which does not rank high as to wealth and population, a great part of its territory being covered with thick forests and rugged mountains. In the south, however, are plains that yield abundance of rice, of which a supply is even sent to Canton. The river Taho, which traverses it throughout, has its navigation obstructed by rocks and cataracts. Considerable mines are said to exist in this province, which the jealousy of the government prevents from being worked. Neither Queyling-fou, the capital, nor any of the other cities of Quangsee, rank with those of the rest of China.

West of Quangsee is the frontier province of Yunan, situated on a still more lofty portion of that great chain which traverses the southern portion of the empire. Though the site be elevated, and the climate consequently temperate, it is well peopled, and yields many valu-

able products. The upland tracts are occupied by a hardy highland race, called Lolo, of a totally different temper from the other Chinese. Such are their valour, and the strength of their haunts, that even this jealous and despotic government has been, after long effort, obliged to content itself with a formal acknowledgment of homage, leaving the internal government to be entirely conducted by hereditary chiefs, to whom their clans pay almost implicit submission. The metallic wealth of the province is said to be considerable, and even to include gold. The capital, of the same name, once handsome and considerable, has been injured by civil war.

From Yunan, tracing the frontier northward, we find Koeitchoo, a still ruder province, filled with turbulent and refractory tribes. Its cities are small, being little better than military posts with strong garrisons, which, as the revenues of the province are unequal to support them, prove burdensome to the imperial treasury. It contains, however, a number of valuable metals, particularly copper.

Setchuen, the next frontier province to the north, presents a much more favourable aspect. Its mountains are only of moderate height, and it is traversed and fertilised by the great river Yang-tse-kiang. Along with the silk, sugar-cane, and grain of China it unites the Tartarian commodities of musk and rhubarb, and is also distinguished for a small and active breed of horses. The capital, Tching-tou-fou, though much injured during the civil wars, is still very populous, and carries on a great trade.

The north-western angle of China is composed of the province of Shensee, which is very extensive, and throws out, as it were, even a long promontory into the Tartarian desert. Its aspect is mountainous, and somewhat rude; but it is highly productive of wheat and millet, and contains copious pastures, on which large herds of cattle are fed. The inhabitants, exposed to perpetual incursions from the Tartars, are trained to arms, and are of a more hardy and courageous character than in other parts of the kingdom. Its capital, Singanfou, is a fine city, strongly fortified, and always well garrisoned.

Between Shensee and Petchelee, with which our survey began, the interval is filled by the small province of Shansee, which presents an aspect very similar to its western neighbour. The climate is healthy; yielding wheat, millet, and even good grapes, which are not, however, employed in making wine: it has also considerable mines of iron. Tay-yuen-fou, the capital, is distinguished for splendid palaces belonging to a former dynasty, now, however, allowed to go to ruin.

After making this complete circuit of China, we have still left the interior provinces of Honan and Houquang, which compose the centre of the empire. They rank among its finest portions, being watered by the two great parallel rivers, and by numerous tributaries with which they are fed. Houquang has been called the granary, and Honan the garden, of the empire. The former is particularly marked by the vast numbers of lakes which it contains, and which are signified by its very name. That of Tongting is described to be 300 miles in circumference, and covered with numberless vessels, the tenants of which derive their subsistence from its waters. Vouchang, the capital, is an immense city, especially when viewed in combination with Hang-yang, only separated from it by the broad channel of the Yang-tse-kiang. The French writers compare the former to Paris, and the latter to Lyons. Thousands of barks along the whole length of these cities form a continued forest. The towns of Honan are not so distinguished, though that bearing the name of the province has been reckoned by the Chinese the centre of the earth. Kay-yong, the residence of the governor, is defended from the inundation of the Hoang-ho only by strong dikes, which were broken down by the enemy in the last war; a disaster from which it has never fully recovered.

China, generally speaking, is a country strictly continental, composed of a rounded range of coast, little broken into bays and promontories. There are, however, several insular appendages to it, which deserve notice. Of these, the most interesting are the islands called Loo-Choo, or Leu-cheu. The great Loo-Choo is about fifty-eight miles in length, and from twelve to fifteen miles broad; and it is the principal of a group of thirty-six, situated about 400 miles from the eastern coast of China. It is at present tributary to the latter country, though the supremacy has been sometimes disputed by Japan; and from China it also derives its literature. The great island itself is represented as one of the most delightful spots on the globe. According to Mr. Macleod, "the verdant lawns and romantic scenery of Tinian and Juan Fernandez, so well described in Anson's Voyage, are here displayed in higher perfection, and on a much more magnificent scale; for cultivation is added to the most enchanting beauties of nature." The sea breezes, blowing over it at every season of the year, preserve it from the extremes of heat and cold; and numerous rivulets, which seldom or never stagnate into marshes, render it at once pleasant and healthy. The population could not be conjectured; but, from the extent and state of cultivation, it must be considerable. The character of the inhabitants appears every way to harmonise with the charms of their climate and scenery. They are gay, kindly, hospitable, and intelligent. They exhibit none of the recluse and contracted habits of the Chinese, but meet frequently together at little festivals in the open air, and appear peculiarly alive to social enjoyment. They showed ex-

treme attachment to the English, though they still adhered to the jealous precaution of preventing them from penetrating into the country, and even as much as possible from landing: as well as to that of keeping the females secluded from their view. This primitive race appeared, to Captains Macleod and Hall, to be wholly ignorant of the use of money, and without any arms offensive or defensive; but the scrutinising observation of Captain Beechey discovered that in neither respect were they so remarkably distinguished from the rest of mankind. The artillery and muskets of the English, however, were to them quite a new and an astonishing sight; but the employment of the latter against animals caused them such pain, that it was soon discontinued. The people of Loo-Choo are a diminutive race, averaging only five feet two inches high; but stout and well built; their faces rather agreeable than handsome. Indeed, the whole animal creation, except the poultry, is small, but otherwise of excellent quality. This interesting group appears to extend about 500 miles in a direction nearly from south-west to north-east. Captain Broughton, who landed on some of the islands at the eastern extremity, found there the same mild and courteous people with those of the great island.

The island of Formosa, called by the natives Tai-ouan, has been chiefly celebrated by the impudent fiction of Psalmanazar. The western part, to which alone the application of Formosa, or fair, is applicable, is in possession of the Chinese, and may rank with their best provinces. Its surface is finely diversified, and watered by numerous rivulets descending from the higher parts of the island. Settlements were formed here first by the Portuguese, and then by the Dutch; but both are now expelled. The eastern part, rugged and mountainous, is occupied by races almost savage, who live by hunting, sleep on leaves, have scarcely any clothes or furniture, and tattoo their skin like the rudest of the South Sea islanders.

Hainan is a large island, 190 miles in length and 70 in breadth, separated by a narrow channel from the southern extremity of the province of Quang-tong. Though in view of vessels going to Canton, it is little known or visited. The interior is mountainous; but a great part of the island is moist and unhealthy; and, though the necessaries of life are abundant, the people seem little improved. They are ugly, of small stature, armed with bows and arrows, and wear scarcely any clothes. When Krusenstern visited them, in 1805, they were found subject to the pirates of the Ladrones. That group of isles, which must not be confounded with a larger one of the same name in the South Sea, extends close along the coast of China from Hainan to Canton. Their aspect is rocky, bleak, and rugged, like fragments torn from the continent by some violent convulsion, and their sides are dashed with the continual spray of the waves. Although a very small European force would be sufficient to root out the nest of pirates that harbour there, they have continued to defy the whole maritime force of the celestial empire.

Along the coast of Tchekiang extends the almost numberless group of the Tchusan islands, of which, in a sail of sixty miles, 300 have been discovered. They are small, not rugged like the Ladrones, but verdant, cultivated, and rising from the sea in a conical shape. One of them, called Pootoo, is described as a perfect paradise, and as being occupied by a body of 3000 monks, who have 400 temples, with houses and gardens attached to them. This establishment is richly endowed, and celebrated throughout the empire. There are many fine ports in these islands, and the channels between them are crowded with almost innumerable vessels, carrying on a commerce, of which the centre is at Ning-po, on the opposite coast. The great Tchusan island is about forty miles in length, and about twenty in breadth. It is highly cultivated. Tinghai, the capital, intersected by canals, resembles Venice on a small scale, and presents a crowded scene of busy industry.

The little that is known respecting the peninsula of Corea may also, with propriety, be appended to the account of China. It is separated from Japan by the Straits of Corea, and by the Yellow Sea from China. The country, 400 miles long by 150 broad, is traversed from north to south by a chain of mountains; and, though some parts are sterile and rugged, it contains a considerable extent of fertile and well-cultivated plains. A great part of what was once supposed to be main land was found by the expedition of Captains Hall and Maxwell to consist of an almost innumerable archipelago of small islands, extending along the western coast. Corea is ruled by a sovereign who pays homage and a small tribute to China, but in his general sway is entirely independent. The people are very little known, but appear to be tall, handsome, and brave. The British expedition, as it sailed along, was treated with the utmost courtesy; but the same jealous anxiety to debar strangers from any access into the interior was conspicuous, as in China and Japan. The arts and letters of China have been to a great extent imported, and Corea has the same written language, though its spoken one is entirely different. Men of letters undergo similar examinations, and hold the same conspicuous place as in that country. Quelpaert, off the southern coast, is distinguished by its lofty mountain, beautifully covered with cultivation. The capital is Kingkitao, an inland town, situated nearly in the centre of the country.

CHAPTER IX.

THIBET.

SECT. I.—*General Outline and Aspect.*

THIBET, or, as M. Klaproth has recently called it, Tubet, forms a mountain region of a very peculiar character. We have already traced the mighty mountain ridge of Himalayah, forming the whole northern boundary of Hindostan. Parallel to this, at a varying distance, extends another, nearly, if not altogether, as lofty, which the Chinese called the Kuenlun, and at its western extremity, Ksoung-ling, or the Blue Mountains. Towards the east, it penetrates with its snowy peaks the Chinese province of Shensee, being there, too, connected with a mighty circuit of mountains that surround the lake of Kokonor, and, as Humboldt conceives, give rise to the Yellow River. At this eastern portion of the range, the interval which separates it from the Himalayah is of considerable breadth, and includes some fruitful and highly cultivated plains. As the two chains proceed westward, the space between them is gradually narrowed, till, at their extremity, they meet and form one mass with the Hindoo Koh, or Indian Caucasus, which extends thence westward through Independent Persia. M. Humboldt even views the two boundary chains of Thibet somewhat as *débris saillans*, shattered branches from the Caucasus. The Hindoos, who see them in their closest approach to each other, consider both as the Himalayah, and Thibet as only a great and long valley enclosed within this astonishing chain. High detached branches from both of the great boundaries penetrate and encroach upon the territory; yet, wherever the breadth is at all considerable, the greater part of it is occupied by a vast table-plain, the most elevated, perhaps, on the globe, which yields only scanty crops of grain, but is pastured with numerous flocks of animals peculiar to this elevated region. Thibet presents a region every way distinct in aspect and character from Hindostan, whence it is separated only by a mountain ridge. Instead of sultry plains, luxuriant harvests, and magnificent cities, appear only rude plains, covered with scanty herbage, and diversified by rocky heights, under whose shelter a few rough-built villages find protection from the chilling winds of the snow-clad mountains.

Besides its grand mountain features, Thibet is distinguished as containing the source of many of the greatest rivers of Asia. The Indus and the Sanpoo, rising near to each other, from that loftiest part of the chain which gives rise, on the other side, to the Ganges and the Jumna, traverse this high plain in contrary directions. The Indus, after draining the waters which descend into it from the western part of both ridges, bursts its mountain barrier, takes a new direction, and flows southward into the ocean. The course of the Sanpoo has not been traced beyond the vicinity of Lassa; and the theory which identified it with the Brahmapoutra has become, at least, extremely doubtful. There seems, however, every reason to conclude, that most of the great rivers which water the empire of China and the kingdoms between it and India, derive their sources from the mountains of Thibet. The Sutledge, the largest tributary of the Indus, also takes its rise upon their border.

Thibet contains the lakes of Manasarowara and Rawan Hrad, picturesque and striking objects, encircled by some of the loftiest snow-covered peaks of the Himalayah, and which are held by the Hindoos in religious veneration; yet they are by no means of great extent. The lake Tchemarorel, farther to the west, is similarly described by M. Gerard. The Chinese maps delineate in the north-eastern part the lake of Terkiri, seventy miles long, and several others, respecting which no further particulars are yet known.

SECT. II.—*Natural Geography.*

SUBSECT. 1.—*Geology.*

Gold is found in grains in many of the rivers, and also disseminated and in masses in quartz rock and other rocks. Silver ores are not mentioned by travellers, but some varieties

References to the Map of Thibet and Tartary.

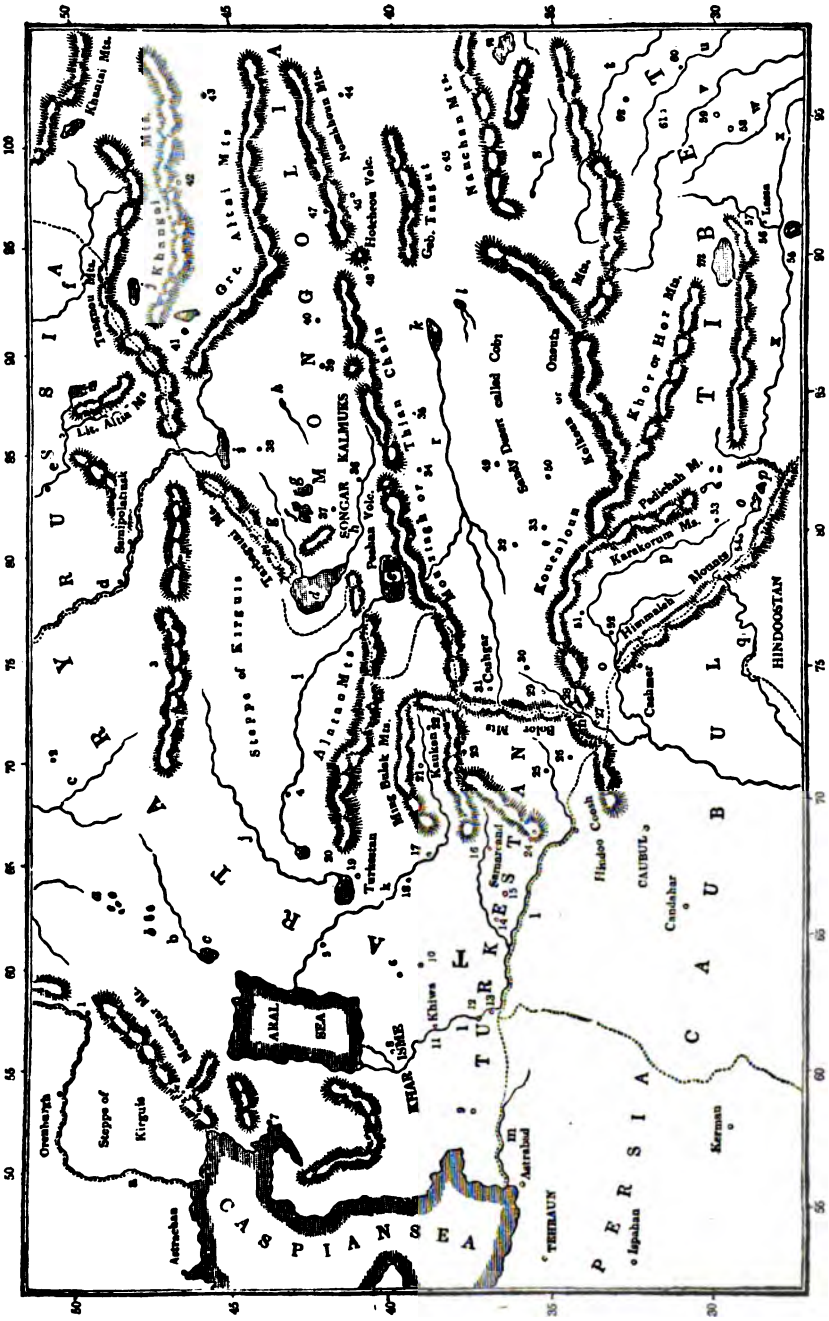
1. Orsk
2. Koktchetov
3. Karkarali
4. Kuduk
5. Bazy
6. Bukhan
7. Kopani
8. Kharabad
9. Abiverd
10. Kala
11. Khiva
12. Tzatmatsegav
13. Amoo
14. Bokhara
15. Kurchee
16. Samarcand
17. Yakhend
18. Uratuba
19. Turkestan
20. Soussa
21. Kokan
22. Kojan
23. Ferganah
24. Sueedabad
25. Durwauz
26. Fyzabad
27. Chitrual
28. Peankob
29. Muscooch
30. Yarkand
31. Cashgar
32. Khoten
33. Kuria
34. Koutche
35. Kharachar
36. Gouldja
37. Kergos
38. Bourgaisoutai
39. Ortu
40. Purul
41. Gobdo Khoto
42. Oulasouti Khoto
43. Karakorum
44. Sogoknoor
45. Koutcheou
46. Hami
47. Berkoul
48. Turfan
49. Peym
50. Guinak
51. Leh
52. Durras
53. Gortope
54. Daba
55. Teeshoo Lomhoo
56. Lassa
57. Panctou
58. Tardsong
59. Louransaong
60. Chamtoo
61. Rilatche
62. Tourman.

Rivers.

a Ural
b Turgai
c Ischim
d Irtysch
e Tom
f Yenisei
g Aiagas
h Ili
i Izoui
j Sarasov
k Jaxartes, or Sirr
l Gihon, Amoor, or Oxus
m Attruck
n Kama
o Sinde, or Indus
p Leh, or S. E. Branch of the Indus
q Sutledge
r Tarim
s Kaukbousai
t Yang-tse-Kiang
u Koolano-Kiang
v Irawaddy
w Keen Duem
x Sanpoo.

Lakes.

a Balekoul
b Koum Koul
c Aksakal
d Palkati
e Issikoul
f Alaktouga
g Alakoul
h Darlai
i Zaisang
j Oubsa
k Lop
l Gaeh Noor
m Terkiri
n Khokho Nor
o Rawan Hrad
p Manasarowara


CASPIAN SEA
ARAL SEA
Orenburgh
Astrakhan
Khiva
Bokhara
Samarcand
Cashgar
Yarkand
Khoten
Turfan
Hami
Tangut
Cashmere
HINDOOSTAN
CAUBUL
Candahar
Hindoo Coosh
Himmaleh
Karakorum Mts.
Kuenlun Mts.
Altai Mts.
Thian Chan
Gob. Tangut
Desert called Cobi
Steppe of Kirguis
Kirguis
PERSIA
Ispahan
Kerman
Astrabad
Amrabad
TIBET
Lake Aksu
Lake Teshoo Loomboo
Lassa

of galena contain that metal. Mines of lead occur, but they are not worked to any extent; ores of iron and copper occur in different quarters, and the Thibetians are said to work rich mines of mercury, the ore being cinnabar. Rock salt is reported to be common; but the most interesting saline mineral met with in Thibet is that named tincal, or borax. According to Mr. Saunders, the lake from which borax and common salt are obtained is fifteen days' journey north from Teshoo Lomboo. Surrounded on all sides by rocky mountains, it receives no rivulets, but is fed by brackish springs rising from the bottom of the lake itself. The borax is found crystallised in the lake, and is taken up in large masses, which are then broken, for the convenience of carriage, and exposed to dry. This mineral, though collected for a considerable length of time, has no appearance of diminishing, and most probably is continually formed anew. The lake is said to be at least twenty miles in circumference. For a part of the year it is frozen over. In Thibet, as in Europe, borax is employed for soldering, and as a flux for promoting the fusion of gold and silver.

SUBJECT. 2.—*Botany.*

The reader is referred to the remarks under this head at page 387.

SUBJECT. 3.—*Zoology.*

The Zoology of Thibet and of Tartary cannot well be separated in a work of this nature, and with the scanty knowledge we yet possess of their productions. We shall therefore enumerate the most remarkable quadrupeds that have yet been found on the elevated deserts of Central Asia.

Georychus Laguru. Hair-tailed Lemming.
Vulpes Corsac. Corsac Fox.
Vulpes Karakan. Tartarian Fox.
Putorius alpinus. Alpine Polecat.
Dipus Jaculus. Siberian Jerboa.
Dipus brachyurus. Short-tailed Jerboa.
Dipus minutus. Little short-tailed Jerboa.
Gerbillus Tamaricinus. The Tamarisk.
Gerbillus meridionalis. Torrid Tamarisk.
Lepus Tolai. Mongolian Hare.
Lagomys Ogotona. Gray Pica.
Equus Hemionus. Mongolian Horse.
Moschus moschiferus. Thibetan Musk.
Cervus Pygargus? Tartarian Roe.
Ovis Ammon. Asiatic Sheep.
Bos poephagus. Yak Bison.

Several of the above quadrupeds claim a more particular notice; as the Mongolian Horse, the Pica Hare, the Musk Deer, and the Tartarian Roe.

The Mongolian Horse (Equus Hemionus *Pall.*) inhabits, in troops, the great central deserts of Asia. It is about the size of an ordinary horse, but is distinguished by having hairs only at the end of the tail: along the back is a black line: the ears in size are rather larger than intermediate between those of the horse and mule: the tail is black, near two feet long, and much like that of a cow. This was probably the wild mule of the ancients. All the proportions of this singular animal exhibit much lightness and elegance. It runs almost literally with the rapidity of lightning, carrying its head erect, and snuffing up the wind: its air is wild and fiery, and the fleetest courser that ever scoured the desert would in vain attempt to overtake it. When unmolested, its character is peaceable and social. Their troops are from 20 to 100 in number, each headed by a chief, who acts as guide and sentinel. It is said to leap three times in a circle round the object which inspires fear. If the chief is slain, which, from his temerity in approaching very near the hunters, will sometimes happen, the troop disperse. The Mongols, the Tungooses, and other Tartar nations bordering the Great Desert, hunt these animals for their flesh, which they highly esteem; but it appears they have never succeeded in taming it.

The Gray Pica Hare is not more than six inches long. It is common in the Tartarian deserts, and beyond Lake Baikal. These little animals dig very deep burrows with two or three entrances, furnished at the bottom with a thick and soft bed of leaves: they wander about during night, for they are exceedingly timid, and have many enemies. In spring they begin to cut and lay in their winter provision of tender herbage, &c., which they pile in numerous small heaps, like haycocks, about the entrance of their dwelling, previously filling that as full as it will hold. To the external store of provisions they probably gain access during the deep snows of winter, by undermining it from their subterraneous retreat.

The Musk Deer of Thibet (*fig.* 668.) yields the valuable drug so called. The animal itself is nearly the size of the roebuck. The flesh is esteemed, although strongly impregnated with this scent. When the animal is killed, the bag is cut away, and made into a kind of purse. So powerfully does every part retain this perfume, that even the blood and liver are frequently mixed up with the genuine musk by the crafty Asiatics.

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Musk Deer.

The Tartarian Roe is larger than our roebuck. It is marked with a large disk of white on the buttocks, and is remarkable for having no tail: it inhabits the loftiest regions, only descending to the plains in winter: the horns are much branched, and of great expanse.

Among the very few Birds yet brought from these unexplored regions, we may notice two large Pheasants, whose singularity and splendour are almost unrivalled.

The Horned Pheasant (*P. cornutus*), (*fig.* 669.) in size and general appearance is between the fowl and the turkey: the top of the head is red, and over each eye is a fleshy blue substance, like a horn, and bent backwards: the throat has a bright blue naked flap, marked with orange spots: the breast and back are red: the rest of the plumage deep chestnut brown, marked all over with white spots surrounded with black.

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Horned Pheasant.

The magnificent Impeyan Pheasant (Lophophorus refulgens *T.*) is larger than a fowl. It is called by the Indians the Bird of Gold: its whole plumage is metallic, reflecting every colour and lustre that can be conceived: the crown of the male is ornamented with several feathers shaped like a lance or arrow, and those of the neck are all pointed. It has been found in the mountains in the north of India, but is very rare.

The domestic animals, among tribes having no fixed habitation, are naturally few. The Tartar Horses appear to be small and ill made, yet docile, and more fitted than any others to undergo long and violent journeys without food. The most vigorous are alone preserved; the others are killed and eaten, to prevent them from consuming provender wanted for the rest. The fat-rumped Sheep (*fig.* 670.) is a breed reared in southern Tartary: the horns are small, or wanting; the ears long and pendulous, and the tail very short and thin. There is another breed, having very broad tails, with four, five, and sometimes six horns; the wool of the first is good, but that of the latter very coarse. The Thibet Goats are well known to furnish materials for those delicate shawls which bear this name: the hair is very fine and long, particularly on the back, and the ears small and pendent.

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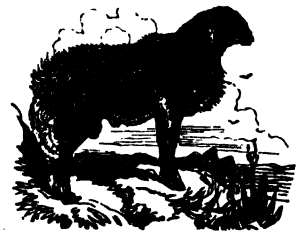

Fat-rumped Sheep.

Sect. III.—*Historical and Political Geography.*

One section may comprehend the very little that can be said on these subjects. Although Thibet be placed amidst nations of ancient origin, its history is almost a complete blank. By the Arabian geographers it is barely named; but, under the name of Tebeth, Marco Polo gives a series of relations which, with a certain tincture of fable, suggest a country not materially differing from that which is now to be described. The ecclesiastical character of its government, and its subjection to a sovereign priest, appear to have favoured a report, that there existed in the heart of Asia a Christian monarch, to whom the early discoverers gave the appellation of Prester John. His sacred character, joined to the strength of the mountain barrier of his kingdom, served in a great measure to the Thibetians as a safeguard against the barbarous tribes by whom they were surrounded. Tradition, however, represents their shrines to have been at different times plundered by the Tartars. The most serious invasion was made in the end of the last century by the aggressive and encroaching power of Nepal. Tempted by reports of the wealth of its temples, and particularly of Pootala, the king of that country marched an army into Thibet, and, after an obstinate war, compelled the Lama to purchase peace by the payment of an ample tribute. The emperor of China, professing to revere that sovereign priest as his spiritual head, determined to interpose on his behalf. In 1791, a Chinese army of 70,000 men arrived at Thibet, and, notwithstanding a very vigorous resistance, drove the Nepalese troops beyond the mountains, from the summit of which the Chinese might even descry the British possessions on the plains below. The Thibetians now experienced the too frequent lot of a weak state which seeks the aid of a stronger. The religious attachment of the emperor to the Lama did not prevent him, when he found the country in his hands, from assuming civil sway over it, and limiting his ally to a spiritual jurisdiction. The whole country is now, therefore, a province of China, which has thus become almost conterminous with the British Indian empire. The sway, however, according to the usual Chinese maxims, is mild, and does not interfere with the original plan of internal administration. The Chinese have only established, along all the Thibetian frontier, that jealous exclusion of foreigners which renders it so difficult to gain information respecting any country included within their territories.

The government of Thibet, so far as it is unaffected by foreign interference, is altogether priestly. The lama, or high priest, is the sovereign, while the successive ranks of monks and gylongs compose the nobility. The laity are the vulgar. It is under the head of religion, therefore, that we must comprehend the political arrangements of this singular country.

SECT. IV.—*Productive Industry.*

Thibet, in respect to agriculture, labours under great disadvantages. The general character of its soil is bleak, barren, and poor: wheat and barley can be grown only in a few favoured situations, and often fail of coming to maturity. Even the herbage, the most valuable product, though it reaches a tolerable height during the rainy season, from March to September, suffers severely by arid and cold winds, which blow during the remaining part of the year, when it often dries up and crumbles into dust. Yet these mountain pastures possess qualities peculiarly nutritious and grateful, and support numerous flocks and herds. Many species of those especially belonging to Thibet are remarkable for their beauty and value. Indeed, this side of the mountains is alike noted for the profusion of animals as the other is for that of vegetable life. Birds, game, and wild animals of various descriptions, are equally abundant with those trained for the use of man.

Among the numerous animals that enrich Thibet, the most prominent seems to be the yak, an animal of the buffalo tribe, but in some particulars resembling the horse. Though not employed in agriculture, the yak is of great value for the conveyance of burdens, and yields also a rich and nutritious milk. Its tail, composed of a mass of long, flowing glossy hair, forms, under the name of chowrie, a considerable article of trade. It is in general demand among the great men of India, both as an ornament and as a flap for dispersing insects. Another animal, equally characteristic and useful, is the goat, which yields the fine wool used in manufacturing the shawls of Cashmere. Smaller than the smallest English sheep, it is the most beautiful of the goat species. The wool grows like down, close to the body, and is covered with a profusion of thick and strong hair. This fine covering is evidently given by nature as a fence against the cold, and soon degenerates in any milder climate. Sheep, though certainly not peculiar to Thibet, are here of peculiar value; the mutton being the finest, perhaps, in the world, and the fleece extremely soft and silky. The lamb fleeces, when tanned with the hair, afford linings considered particularly luxurious in China, Tartary, and all the cold districts of Asia. Goats and sheep are used in this country as beasts of burden, in which capacity they follow each other in long trains, and make their way with surprising safety across the most difficult and perilous mountain passes. The musk deer, a product of the chase, is found also in the neighbouring parts of China and Tartary, but is peculiarly abundant and valuable in the high districts of Eastern Thibet.

This country seems to have been almost as bountifully stocked by nature with mineral as with animal productions. The imperfect skill of the inhabitants, however, the scarcity of timber, and the difficulty of transport, render the coarser and more useful kinds of little value, unless for immediate consumption. In this view, the most estimable product is gold, which is found nearly pure, in the form of dust, and sometimes in pretty large pieces. Copper is drawn from the mines in considerable quantities as a material for the manufacture of idols, gongs, and sacred instruments. Near Teshoo Lomboo is a mine of lead, obtained by the simple process of fusion. There are also mines of cinnabar rich in mercury, which the natives have not the skill to extract. A most valuable fossil substance is the tincal, said to be deposited at the bottom of a lake, surrounded by lofty mountains in the north-east, and fed by mineral springs bursting forth in its own bed. The tincal is detached in large masses, and, besides those employed for fusion and other purposes, quantities of it are taken, by way of Bengal, to England, where it is refined into borax. Rock salt is likewise plentiful.

The manufactures of Thibet are rude, and only adapted for immediate consumption; but commerce exists on a considerable scale, and under some striking aspects. It is, of course, entirely inland, and carried on through perils and difficulties, only equalled by those, of an opposite nature, to be encountered in crossing the burning sands of Africa. The merchandise must be conveyed over the tremendous steeps and snows of the Himalayah, by tracts rudely formed along the edge of precipices, obstructed by falling rocks and showers of stones, and where the least false step may hurl the travellers into instant destruction. Thibet thus maintains, however, a commerce of some extent, by the export of gold, tincal, musk, shawl-wool, and sheepskins; while from Bengal it imports cloth, particularly woollen, tobacco, spices, and toys; from China, tea, porcelain, and silk. The trade is much impeded by the injudicious system of the chiefs, who monopolise the most valuable articles, particularly musk and wool, and by the disposition generally prevailing among them, rather to carry on traffic themselves, than to protect their subjects in doing so.

SECT. V.—*Civil and Social State.*

Religion forms the essential basis of the constitution, both civil and social, in this mountain region of Asia. The system which here holds sway is that known in Asia under the title of Boodh, its founder, and of the Lama, its sovereign head; while in China the same worship is denominated that of Fo, and in Tartary is called Shamanism. It had its origin in Hindostan, though now nearly expelled thence by the rival system of Brahma; from which it is generally supposed to have separated as a schism, though others conceive it to

have been the parent superstition. It is so far less enlightened, that its objects of worship are mortals exalted into deities, instead of a spiritual and eternal Author of the universe. The doctrine of transmigration is alike held under both religions; but in that of Boodh, it is converted from a speculative belief into a powerful engine of practical influence. As soon as the Lama dies, the priests, by supposed celestial indications, discover an infant into whom his soul is supposed to have transmigrated. This person is immediately exalted into the character of Lama, and in his name all the civil and ecclesiastical affairs of the state are administered. In Thibet and the bordering regions of Tartary, every great district has its Lama; but the chief of these spiritual sovereigns is the Grand Lama, who resides at Lassa; next to him is the Teshoo Lama, resident at Teshoo Lomboo. The latter, at the period of the English embassy, was only a year and a half old, having but just, it was supposed, had transferred to him the spirit of his deceased predecessor; yet the ambassadors were admitted to an audience, in which he acted his part with surprising propriety. As the sovereignty centres in the Lama, so the nobility is formed by the monks called jelums or gylongs. The monastic principle exists under the Boodhist system in its utmost rigour, accompanied by the same usages of seclusion and celibacy which distinguish it in the Catholic church. These habits being adopted by the most celebrated characters both in church and state, the idea of dignity is exclusively centred in them, and those of degradation and vulgarity are attached to marriage. The priests reside in large mansions, much the handsomest in the country, and uniting the character of convents and palaces. The monks in the villages bordering on India are represented as a dirty, greasy, good-humoured, happy class of persons, who do not think it inconsistent with their vocation to carry on a good deal of worldly traffic. In the great central establishment, more dignity of character is preserved, and the obligations imposed by their situation appear to be strictly regarded. On the whole, their deportment is represented as humane and obliging; on the part of superiors unassuming, and respectful on that of inferiors. Somehow or other, however, all the wealth appears to centre in them, and a general poverty pervades the rest of the community. The ceremonies of the Boodhist religion bear a striking resemblance to those of the Catholic, insomuch that many of the missionaries found it scarcely possible to discover any distinction. This has even been ascribed by some to a mixture with the votaries of the Nestorian heresy, which was spread through the East. A favourite part of the service consists of music, less remarkable for its harmony than for the employment of every means of raising as great a noise as possible. Not only are all the voices of the congregation put forth, and trained by practice to an almost stentorian pitch, but drums, trumpets, cymbals, hautboys, and other instruments of the most sonorous description, of three or four times the usual size, swell the chorus. One of the favourite exercises of devotion consists in producing by the hand the revolution of a painted wheel with gilded letters, on which the gaze of the worshipper is fixed. Notwithstanding the difference between the religions of this country and Hindostan, many of the temples of Thibet are crowded with Hindoo idols; and the seats of Indian pilgrimage, particularly Benares, Juggernaut, and Sagur, are devoutly visited by votaries from the dominions of the Grand Lama. On their part, the Hindoos pay a deep religious veneration to the lofty snowy peaks and the lonely mountain lakes of this elevated neighbourhood. Among the former, Chumularee, on the Boutan frontier, and among the latter Manasarowara, hold the pre-eminence.

Of the learning of Thibet scarcely the least notice has reached us; and yet there appears to be a good deal. The Thibetians possess the art of printing, derived, apparently, from the Chinese; since it is executed, like theirs, on fixed wooden blocks instead of movable types. The language has a large infusion of Sanscrit, and is admitted by the Chinese to be superior to theirs in sound, though its characters have not equal beauty. It is written, conformably with the practice in Europe, but contrary to that of the East, from left to right. Turner found the mausoleum of the Lama (*fig.* 671.) filled with high piles of sacred books. M. de Koros, a Hungarian physician, who has resided in the country, and acquired its language, discovered an encyclopædia, in forty-four volumes; and a system of Boodhism, comprising also a general view of the arts and sciences, in 108 volumes. In those discovered among the Calmucks, the Russians complain of impenetrable mystery; but, perhaps, such specimens might not be the most favourable. The Thibetians must have had some skill in astronomical observation, since they were acquainted with the satellites of Jupiter, and even with the ring of Saturn.

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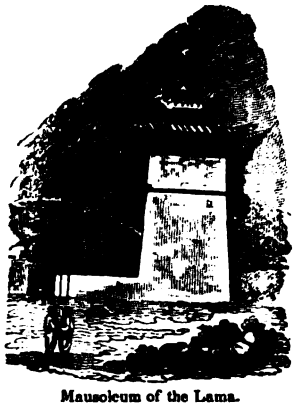

Mausoleum of the Lama.

In social life, the most characteristic feature is that unique species of polygamy, peculiarly opposed to the general Asiatic ideas, and consisting in the marriage of one wife to

several husbands. All the brothers of a family have only one spouse among them, the privilege of selecting whom rests with the eldest. It seems to be said that a surprising degree of harmony prevails in this extraordinary kind of household: the females, who are active and laborious, enjoy higher consideration than those of India or other Oriental countries.

The ordinary buildings in Thibet are very rude, consisting of rough stones heaped together without cement, and with flat terraced roofs. The only thing like ornament consists in a small banner, composed of pieces of rag or white paper, employed as a charm. On the contrary, the religious edifices, which unite the triple character of temples, monasteries, and palaces, display in many instances an extraordinary splendour. That of Teshoo Lomboo, with its white walls, coloured wooden roofs, numerous gilded canopies and turrets, makes an appearance almost magical; and the apartments are furnished with a regard both to elegance and comfort. That of Pootala, at Lassa, is said, by M. Klaproth, to be 367 feet high, to contain 10,000 apartments filled with images in gold and silver, and to have its roof richly gilded. There, as at Teshoo Lomboo, the state apartments are at the top of the edifice, seven stories high. The villages and monasteries are generally situated about half way up the insulated rocks which diversify the table-plain of Thibet. The rock above shelters them from the cold blasts; that below affords channels by which the melted snow may run off, while in the heart of it granaries and magazines are usually excavated.

The national dress of Thibet, contrary to that of India, is composed of thick woollen cloth, and prepared sheepskins with the fleece turned inwards, forming a comfortable protection from the severity of the climate. The religious orders wear a vest of woollen cloth with red sleeves, a large mantle resembling a plaid, with a kilt, and a pair of huge boots. Silks from China, and furs from Tartary, are employed by the higher classes. A fine white silken scarf is an invariable present on occasions of ceremony, and is enclosed in complimentary letters.

The religion of Thibet does not impose the same austere abstinence in respect to food, to which the leading castes are subjected under the Hindoo system. A general renunciation of animal food, indeed, would very reluctantly be observed in a country which scarcely affords any other aliment. The heads of the church and state, however, seem to value themselves on great simplicity of diet, and abstinence from strong liquors. Tea is the universal drink, not taken, as with us, in a purely liquid form, but thickened with flour, salt, and butter, the leaves being retained, so as to form a mess by no means agreeable to an European palate.

The entirely religious character of the people of Thibet is scarcely compatible with any very varied amusements; though their religious exercises, from their splendour, and their imposing effect on the senses, may almost be accounted as such. The game of chess is well understood, and frequently played.

SECT. VI.—*Local Geography.*

Our topographical knowledge of Thibet is extremely imperfect, and, unless at a few detached points, can scarcely be considered as having any existence. The missionaries, indeed, found in the Chinese archives a map constructed upon the information of two lamas, who had been sent by that government to make a survey of the country. It contains, at best, mere outlines and names, and is evidently far from being strictly accurate. This defect, partly owing to a civil war which broke out in the course of their mission, particularly appears in the delineation of the course of the great rivers, since the Indus and the Ganges are evidently confounded; the latter being represented as flowing along the table-land of Thibet, and penetrating the Himalayah. Our definite knowledge, therefore, is confined to the very few points which have been visited by European travellers, and to some recent extracts, made by M. Klaproth from works published in China.

Lassa, or Hlassa, the capital spiritual and temporal, "the Rome of central Asia," is situated in the finest part of Thibet, an extended valley bordered by stupendous mountain ranges. The winters are severe; but from April to October, notwithstanding occasional cold blasts, the climate is warm; rice, the vine, and other fine fruits come to maturity. The city, independent of its chief ornament, which is the temple of Pootala already described, is represented as handsome and opulent. In the surrounding plain are twenty-two other temples, all richly adorned, and of which those of Sera and Bhraeboung are described almost to rival Pootala. The entire number of priests and monks maintained at the expense of government is stated at 84,000. Lassa is the seat of the grand or sovereign Lama, from whom all the priests and sovereigns of that denomination, throughout Thibet and Tartary, receive their investiture. He ranked, also, till lately, as the civil ruler of an extent of country about 300 miles in length, and composed of the best territory in this region; but the Chinese, as already observed, after expelling the Nepalese invaders, have established at Lassa a military commander and a civil governor, and virtually annexed it to their empire. They rule it, however, with a mild sway, leaving all the ecclesiastical institutions undisturbed, and in full possession of their ample endowments; and the tribute, conveyed by an annual embassy to

Peking, is extremely moderate. Within the district of Lassa, and to the south, is the remarkable lake of Palte, described as forming merely a belt of about four miles broad, round the large interior island which it encloses.

Teshoo Lomboo is the seat of a lama, second in rank to that of Pootala, but is rendered interesting to us by its close vicinity to the Bengal frontier, from which it is only separated by the mountain district of Boutan. Two successive embassies, under Boyle and Turner, have been sent thither, and have made us tolerably acquainted with the place and neighbourhood. About 400 mansions combine to form a large monastery (*fig.* 672.), the walls of which are built of stone, the roofs of coloured wood, and crowned with numerous gilded canopies and turrets. According to the usual system, it is built under the shade of a high rock with a southern exposure, and looks down upon the great river Sanpoo, whose course is here diversified by numerous islands, through which it flows in deep and narrow channels. The number of monks and gylongs, the sole inhabitants of this monastic capital, amounted in 1783 to 3700. Between it and the Boutan frontier is the district of Jhansu Jeung, surrounding a monastery of the same name, and containing a considerable manufactory of that thick soft woollen cloth which is generally worn in Thibet.

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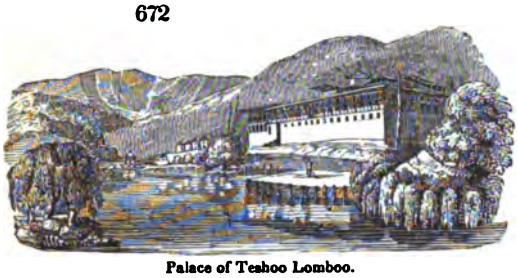

Palace of Teshoo Lomboo.

Mr. Moorcroft penetrated at a more westerly point into the region beyond the mountains, called there the *Undes*, or plains. He went with the double object of opening a trade in shawl wool, and of viewing the celebrated lake of Manasarowara, and the rivers, if any, which flowed out of it. The only entrance from India is by a narrow and most perilous path, along the precipitous sides of these loftiest mountains of the Himalayah, which give rise to the Ganges. Niti, a village of about sixteen poor houses, forms the frontier point; beyond which, on the Thibet side, the road passes over a tract whose extreme elevation is indicated by its effects on the human body,—oppressed respiration, and a giddiness threatening apoplexy; the blood, at the same time, bursting from the lips, and all the parts exposed to the air becoming red and sore. Here all the tops of the mountains are covered during the night with snow, which melts in the heat of the day, and thus fills the beds of numberless torrents. The first village reached in the Undes is Daba, perched on a number of irregular eminences, and sheltered by a hill of great height. The administration seemed in this region divided between the Lama and the Deba or civil governor; but the Chinese commands were of paramount authority.

About eighty miles to the north of Daba lies Gertope or Gortope, the chief market for the shawl wool. This place is rather a camp than a town, consisting merely of clusters of black tents made of blankets fastened to stakes by ropes of hair, and adorned at the tops with flags formed with shreds of coloured silk and cloth. It is situated in the midst of a vast plain, covered with large flocks of sheep, goats, and yaks; not fewer, it is supposed, than 40,000.

About 100 miles to the south-east of Gortope are the lakes of Rawan Hrad and Manasarowara. The latter, though of smaller dimensions, bears a much greater name, and is an object of reverential pilgrimage from all parts of Hindostan. The few, who can overcome the tremendous obstacles encountered in the way, consider all their sins as forgiven, and an entrance into paradise as secured. The lake Manasarowara is of an oval form, about fifteen miles long and eleven broad, surrounded by cliffs of prodigious height, haunted by vast numbers of aquatic eagles and a species of gray wild geese. It is studded with numerous convents, above which the loftiest mountains of the Himalayah rear their snowy pinnacles. It has been generally reported that some great river, supposed once to be the Ganges, and afterwards the Indus, had its source in this lake; and even that the Sanpoo issued from it in an opposite direction; but Mr. Moorcroft could not discern the least trace of any outlet. He was, however, prevented by illness from making the complete circuit in person. The Rawan Hrad was described to be four times as large as the Manasarowara, and is supposed to give rise to the Sutledge; though this, too, seems not fully ascertained. Between these lakes and Daba, the country is filled with hot springs, largely impregnated with calcareous matter. Those at Tirtapuri throw up the water, which is intensely hot, to the height of a few inches.

It appears that, though not from the lake Manasarowara, yet from some of the mountains in its vicinity, the main branch of the Indus takes its rise, and, after passing Gortope, rolls to the north-west, for more than 300 miles, till it passes Leh or Ladauk. This province, the most westerly of those which have been included in Thibet, appears to be rude and

decidedly Tartar. The Ladaukis have held themselves independent of China, and were accustomed to lay waste the Undes by frequent inroads, till the Chinese government adopted the expedient of assigning that territory in jaghire to the Grand Lama, who is held in such reverence by the Tartar tribes, that they have been induced to desist from their ravages. They have stipulated, however, that the shawl wool sent from the Undes to its market in Cashmere shall be conveyed exclusively by the route of Ladauk. The town of that name is the seat of a considerable trade, being the place of transit for the caravans which come along both sides of the valley of the Indus, from Thibet, Hindostan, and Cabul. It is stated by Humboldt to bear the name of Tubet, and, perhaps, has communicated that appellation to the whole region. To the north ascend the snowy steeps of the Mooz Tagh, or Mouztagh, whence descends a rapid stream called the Shayook, which joins the Indus at Ladauk. About 100 miles to the west, at Draus, that river is joined by another tributary from the south-east, which has been sometimes considered as the main stream.

CHAPTER X.

TARTARY.

TARTARY is the name given in Europe to that immense region extending almost entirely across Asia from the Caspian to the Eastern Ocean. It is the second of the three great belts into which that continent is portioned out. Although the name of Tartary be only partially recognised within these limits, and though, in so vast a region, much diversity of every kind must necessarily exist, the general similarity is striking.* Many parts of it are bordered, and even pervaded, by chains of mountains; and large cities, cultivated spots, and fixed societies, here and there occur. It contains also sandy deserts of considerable extent. Still the predominant characteristic is that of plains almost boundless, covered with herbage more or less abundant, and occupied by wandering and pastoral tribes, whose camps, like moving cities, pass continually to and fro over its surface.

SECT. I.—*General Outline and Aspect.*

The surface of Tartary consists of bold and strikingly contrasted features on an immense scale: in the west, long and lofty chains of mountains supporting very elevated table-lands; in the east, a plain of astonishing extent. The researches of Humboldt and his learned coadjutors have thrown great light on the configuration of this vast region, which was before involved in much obscurity.

Three great chains of mountains, running from east to west, traverse the wide expanse of Eastern Tartary. Two of these are limitary; one, the Kouenloun, or Kuenlun, already described, which separates it from Thibet; the other the Altaï, dividing it from the bleak regions of Siberia. This last remarkable chain extending eastward under the titles of the Sayanskoi and Yablonoy mountains, is prolonged almost from the sources of the Irtysch and the Obi to the Eastern Ocean. The intermediate chain, which is wholly Tartar, and divides the country into two great table-plains, is called by the Chinese the Thianchan, or the Celestial mountains. This range, hitherto imperfectly distinguished from the Altaï, appears to reach its highest pinnacle to the north of Turfan and the lake of Lop, where three peaks covered with perpetual snow are celebrated under the title of the Holy mountain (Bokhdaoola), or of "the mountain of the queen." Hence Pallas, who erroneously views this chain as part of the Altaï, has given to the whole the name of Bogdo. The Turks have attached the appellation of Mouztagh, or Snowy mountain, to its western portion, where it stretches beyond the general range, and shoots a branch towards Khojend, separating the sources of the Oxus from those of the Jaxartes. Here the lofty peak termed the Throne of Soliman, and several others, appear covered with perpetual snow. Considerable mountains also occur north of the Jaxartes; but all these gradually sink into the vast low level of western Tartary. Eastward, near the frontier of China, this elevated range declines, partly into the great desert of Cobi, partly into a lower range separating that empire from the country of the Mandshur Tartars. The boundary in that direction is formed by the transverse chain of the Khingkhanoola, beyond the meridian of Peking, which runs from south to north, and probably connects it with the branches from the Altaï. At the western extremity, the plain enclosed between the Thianchan and Siberia, is believed to be entirely

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* [Much confusion exists in geographical works on account of the improper extension of the term Tartar, (more correctly, Tatar,) to several entirely distinct families of nations, and even the accurate Burnes confounds the Turkish Uzbeks with the Tartar tribes. According to Klaproth, whose knowledge of the oriental languages renders him an authority on this point, the term Tartar is applicable only to the Mongols, Calmucks, Kalkas, Eluths, and Burats, who have as little in common with the eastern Mandshurs as with the Turkish nations of the west. The Kirghises, Kuzzauks or Cossacs, the Uzbeks who are the ruling people of Kokan, Bokhara, Khiva, and Koondooz, the Turkomans, who roam over the regions south-west of the Oxus, and the various people within the Russian limits generally called Tartars, are of Turkish origin.—AM. ED.]

open, and connected with that of Independent Tartary. It is otherwise with the plateau south of the Thianchan, and separated from Thibet by the Kuenlun. The extremities of these two boundary chains are connected by a transverse one called the Beloor or Bolor, of a peculiarly lofty and rugged character, and affording only two narrow and difficult passes, by which caravans can penetrate into Eastern Tartary. This remote corner of Asia is distinguished by valuable mines of ruby, lapis lazuli, and other precious stones.

These three mighty chains enclose two great table-lands, of which the Thianchan forms the central and common boundary, whence the southern extends to the Kuenlun, and the northern to the Altaï. The former, commonly called Little Bucharia, is very imperfectly explored, not having been traversed for several ages by any European; but it is known to contain several states that have risen to a considerable height of culture and civilisation. An impression has prevailed, as if this were the most elevated plain on the globe; but Humboldt observes, that a country in the fortieth degree of latitude, where cotton, the vine, and the silkworm come to maturity, can scarcely exceed in elevation the plateaux of the Mysore, Spain, and Bavaria. The northern table-land, called commonly Mongolia, is, probably, nearly similar in elevation; but, being in a more northerly situation, its climate is much more bleak and ungenial: it yields, in its best tracts, only pasturage, and includes large expanses of sandy and saline desert. The country still farther to the eastward, occupied by the Mandshur and other tribes of Tartars, is still more imperfectly known, but appears to consist, likewise, of an alternation of mountain and table-land, bearing still more decidedly a rude and pastoral character.

Western or Independent Tartary presents an aspect entirely different; and, as the one is supposed to rise higher, this is believed to sink lower than any tract on the surface of the globe. A few branches, indeed, from the lofty mountains, which give rise to the Oxus and the Jaxartes, penetrate its border; but in extending westward to the Aral and the Caspian, the surface declines lower and lower, till a great extent of it is believed to be 200 or 300 feet beneath the level of the sea.* It consists generally of a vast and monotonous level, which by the scarcity of water is rendered in many places almost a desert; and the fine countries fertilised by irrigation from the great rivers, are little better than large oases amid a greater surrounding waste.

A considerable number of rivers descending from these high mountain ranges traverse the great upland plain of Tartary; but, unable, across so many barriers, to reach any of the surrounding oceans, they expand into large interior salt lakes, whose magnitude entitles them to the appellation of seas. The Caspian, indeed, the largest inland sea on the globe, is fed, not from Tartary, but by the Volga and the torrents of the Caucasus. The Aral is the receptacle of the two great characterising rivers of Tartary, the Oxus or Amoor, and the Jaxartes or Sirr, which rise in different parts of the transverse chain of the Beloor Tagh, and flowing westward through the long tracts of Independent Tartary, fall into the Aral. The Oxus seems to hold a course of about 1000 miles, and the Jaxartes of more than half that length. Along and between these streams are situated the most fertile and populous tracts, and the most powerful states, of Western Tartary. In Little Bucharia, another series of rivers, flowing eastward from Aksou, Cashgar, and Yarkand, unite in the Tarim, which proceeds in the same direction towards the great lake of Lop. To the north of the Thianchan, the Ili, a considerable stream, flows westward into the lake Balkash or Palkati. Several other rivers traverse this part of Asia, and expand into lakes. The Irtysch, Angara, and Selinga, though they rise in this region, soon break the northern barrier, and roll through Siberia. Eastern Tartary is watered through nearly its whole length by the Amoor or Saghalien, which, after a somewhat winding course, falls into the long narrow strait that separates the continent from the island of Saghalien. It may vie in magnitude with the greatest Asiatic streams; but, from its unfavourable position, it conduces little to the interests of commerce and communication.

Sect. II.—*Natural Geography.*

Subsect. 1.—*Geology.*

The central and interior portion of Asia, which forms neither an immense cluster of mountains nor a continued table-land, is crossed from east to west by four grand systems of mountains; these are, the Altaï, the Thian-chan, the Kuenlun, and the Himalayah. The Altaïan chain exhibits magnificent displays of primitive and transition rocks, which are more or less deeply covered with secondary and tertiary deposits. The metallic wealth of this range is great; for, independent of other metals, it affords annually 70,000 marks (a mark is equal to 4608 grains) of silver, and 1900 marks of gold. The geology of the system of the Thian-chan is not known; and we are equally ignorant of the geognostical structure and composition of the Kuenlun. The little that is known of the Himalayah range is noticed in our account of Hindostan. It is worthy of remark, that ancient volca-

* See note on page 436.

noes, and some in a state of activity, have been met with in Central Asia. The most remarkable volcanic mountains are Pechan, Houtcheou, Ouroumptsi, Kobok, and Aral-toube. These mountains, along with other similar tracts, form a volcanic territory, the surface of which is upwards of 2500 square leagues, and which is distant 300 or 400 leagues from the sea. Vast quantities of sal ammoniac are collected in this volcanic region.

Great western Asiatic depression. The Caspian Sea and the Lake Aral occupy the lowest part of this great depression, whose surface is probably 18,000 square leagues in extent, and which lies between the Kouma, the Don, the Volga, the Yak, the Obsheysyrt, Lake Aksakal, the Lower Sihon, and the Khanat of Khiva, upon the shores of the Amoor, and whose surface is situated below the level of the sea.* This very low country abounds in tertiary formations, whence proceeds melaphyre, and in débris of scorified rocks, and offers to the geognostic enquirer, from the constitution of its formations, a phenomenon hitherto almost without parallel on our globe. To the south of Baku, and in the Gulf of Balkan, this aspect is materially modified by volcanic forces. On both sides of the isthmus between the Caspian and Black seas, naphtha springs and mud volcanoes are numerous. The mud volcano of Taman is a dependency of Baku, and of the whole peninsula of Absheron. Eruptions take place where the volcanic forces encounter the least opposition. On the 27th November, 1827, crackings and tremblings of the earth, of a violent character, were succeeded, at the village of Gokmali, in the province of Baku, eight leagues from the western shore of the Caspian Sea, by an eruption of flames and stones. A space of ground, 290 toises long and 150 wide, burned for twenty-four hours without intermission, and rose above the level of the neighbouring soil. After the flame became extinct, columns of water were ejected, which still continue to flow.

SUBSECT. 2.—*Botany.*

The reader is referred to the remarks under this head, at page 337.

SUBSECT. 3.—*Zoology.*

The Zoology of this country is described with that of Thibet.

SECT. III.—*Historical Geography.*

The Scythians of the ancient world, the Tartars of modern times, have maintained in all ages an unchanged character. In war, their name has always been memorable. Their rapid inroad, their sudden and desultory attack, their flight which defied pursuit, enabled them to baffle all attempts to effect their subjection, though made by the greatest conquerors of antiquity. In those ages, however, their power was chiefly displayed in maintaining their rude independence, and occasionally committing extensive ravages on the more favoured regions subject to the great empires. They could not, except in one instance recorded by faint tradition, reduce their conquest to any permanent subjection. The clouds of arrows which they shot flying, though they might harass, could not vanquish in regular battle, the well-armed and better disciplined troops of the great military nations. The tide of Arabian invasion, which reduced to subjection the countries beyond the Oxus, appears to have first caused a reaction. The Turks from the countries beyond the Jaxartes poured down in vast bodies, and not only drove the Arabian invaders out of central Asia, but overran the greater part of Persia, which the Turkish princes of the race of Seljuk governed for the greater part of two centuries. Even after being expelled by subsequent revolutions, they found a home in Asia Minor, where, being recruited by voluntary levies, they at length succeeded in subverting the Greek empire of the East. Tartary began now to wield entire the destinies of Asia. In the thirteenth century, Zingis Khan rallied round his standard the tribes of Mongolia, of the same race with those who had formerly, under the name of Huns, and under the command of Attila, ravaged the remotest countries of the West.† After having assembled under him all the native bands, he began the conquest of China; which was completed by his successors, who afterwards added Western Tartary, and Persia with all its appendages; so that, with the exception of India, they reigned almost the supreme and sole rulers of Asia. To this immense dominion they afterwards added Russia and part of Poland, while Hoolagoo subverted the throne of the caliphs. The empire of Zingis, however, was divided among his sons, the Tartaric part forming what was called the empire of Kapschak, while distinct branches ruled over Persia and China. This order of things continued till the rise, in the fourteenth century, of the empire of Timur. This prince, taking advantage of the dissensions which reigned among the posterity of Zingis, successively overcame them,

[* It is by no means certain that there is here any such depression of the surface. Parrot, who advanced this opinion in 1811, declares that his barometrical observations made in 1829 (Reise zum Ararat) do not indicate such a phenomenon, and is disposed to refer the results of his previous operations to some defect in his barometer. The barometrical observations of Humboldt, Rose, and Ehrenberg do not show any depression.—AM. ED.]

[† Klaproth seems to have proved that the Huns, Avars, and Hungarians, who committed such terrible ravages in Europe, were not Mongol, but Finnish tribes.—AM. ED.]

and on their ruin erected a new empire, as splendid as that which he had subverted. He conquered Persia, overcame and made prisoner the proud Bajazet, and crushed for a time the rising power of the Turkish Roumelian kingdom. But India was the most splendid and permanent acquisition of the house of Timur, and, under the title of Mogul emperors, they reigned over it, long after the vicissitudes of fortune had obliged them to quit hold of their original seats.

In the last two great revolutions the conquerors had belonged to the race of Mogul or Mongol;* but the Turks, or Toorks, who had begun the career of conquest, again appeared on the field. Pouring in vast bodies from the least known part of interior Asia, they overran all the fine country on the Oxus and Jaxartes, and carried their arms as far as the grand range, the Hindoo Koosh, which separates Tartary from Cabul. They have not as yet made any attempt to pass that barrier, or to grasp any of the southern sceptres of Asia. These tribes, indeed, have never been united under one head, but have been divided into several distinct monarchies, of which the most powerful and flourishing are those of Khiva and Bokhara on the Oxus, and of Kokan on the Jaxartes.

Eastern Tartary, meantime, had effected by conquest an important revolution. China, the most valuable possession belonging to the posterity of Zingis, had remained to them after every other had been wrested out of their hands; but at length they were so far weakened by ease and prosperity, that even that timid nation succeeded in driving them out, and re-establishing a native dynasty. This was a situation, however, in which China was not destined long to remain. In the seventeenth century, the Mandshurs succeeded in reducing it under their yoke. To the empire thus formed were speedily annexed, not only the original conquering state, but the whole of Mongolia as far as the frontier of Asiatic Russia, and all the interior countries of Tartary to Beloor Tagh and the boundary of the Uzbeks. Over all these countries China has established a very mild sway, leaving the internal administration almost wholly in the hands of the natives, and not scrupling to procure the submission and peaceable behaviour of the wandering tribes by paying rather than receiving an annual tribute.

Sect. IV.—*Political Geography.*

The government of all the Tartar races presents a singular phenomenon. This bold and rude people, who seemed to set the whole world at defiance, are yet subject to a despotism as complete as that established in Turkey or Hindostan. As this cannot be placed to the account of any thing timid or effeminate in their nature, it must arise from some other principle in the human mind. The Tartars do not, like the shepherds of a civilised country, lead their flocks through remote and sequestered valleys, and spend their days in peaceful seclusion. They move from place to place, usually in large bodies, united for some purpose either of war or plunder. It has been always found necessary that the leader of a military enterprise should be invested with discretionary powers. The habitual exercise of these powers, with the attachment and admiration generated in the minds of the followers whom he had guided with success in a series of such expeditions, give him, by degrees, a permanent claim to supreme authority. The same tendency is greatly aided by the superstition incident to a barbarous people, whose creeds, all derived from the south, are accommodated to the system of absolute power there prevalent. Under the character of mollahs and of lamas, many of the princes of Asia preach and rule. Although, however, every thing in these states owns the supreme law of the sovereign, minute inspection discovers in the inferior branches indications of aristocratic and even of popular influence. Each nation is formed by an aggregation of clans or *oorooghs*, the members of which are united to each other by strong hereditary ties. Over each ooroogh is a chief, who, according to Mr. Frazer's account, is, in Tartary as well as in Cabul, elected in many instances by the body of the clan. This chief administers all its internal affairs, and arranges the quotas of tribute and military service exacted by the general government. The general heads of clans, however, do not unite in any assembly, or claim the right of exercising any regular control over the measures of the sovereign.

The vast tracts under Chinese dominion, composing about two-thirds of all Tartary, are subject in a manner to despotism over despotism. The people are despotically ruled by their native prince, while he is held in complete thraldom through the military occupation of his territory by a foreign power. Yet the sway of this great empire is said to be singularly mild, and even auspicious to the rude realms over which it extends. It prevents their bloody internal contests, their roving propensities, their predatory habits; it promotes the influence of order and industry. In the flourishing districts of Cashgar and Yarkand, it is even said to have generated such an attachment among its subject tribes, that, far from feeling any inclination to shake off the yoke, they would even fight with zeal in its cause.

The military force of all the Tartar states consists of cavalry, which for the strength of

* [Timur was not a Mongol, but a Turk. The princes of Delhi, his successors, commonly called the Grand Moguls, were, therefore, of Turkish and not of Mongolian descent. The invaders, who drove out the descendants of Timur from Turkestan, were, as is stated in the text, Turkish tribes.—Am. Ed.]

the horses, the hardihood of the troops, their endurance of fatigue, and even their valour in a tumultuary shock of battle, are scarcely equalled, perhaps, in the world. If Bokhara, Kokan, and the other kingdoms of Independent Tartary, were united under one head, they would muster about 300,000 such horsemen, well mounted and well conditioned, and might renew the ages of Tartar conquest. Yet a mere tumultuary host of this nature, without infantry and without artillery, would probably, if brought into contact with a force either European, or trained after the manner of Europe, be wholly unequal to the contest.

As Tartary is divided into a number of separate states, connected only by the general similarity of institutions and habits, the details of the power, revenue, and administration of each, so far as they can be ascertained, must be given under the local section.

SECT. V.—*Productive Industry.*

Tartary, with some local exceptions, is a poor country, scarcely affording to a thin population the mere necessaries of life. Articles of luxury it does not produce; and it affords few others for which they could be received in exchange. Whatever of splendour has shone in the courts of Karakorum or Samarcand, has been wrested, by the sword, from their effeminate possessors in southern Asia. Conquest, indeed, no longer enriches Tartary; but the plunder of caravans, or the booty swept together in long *chepaos*, or forays, forms still the chief source of wealth to its petty khans and chieftains.

In regard to agriculture, although in some favoured districts there are fixed tribes who cultivate the ground, the general aspect of modern as of ancient Scythia, is that of a pastoral region. The horse is the wealth and strength of Tartary. Those, however, for which this region is so famous, display neither the elegance, the airy lightness, nor the almost preternatural swiftness of the Arabian steed. They are inferior in these respects even to those of Persia and the Deccan. They are of great weight, with long bodies and large limbs. Their merit consists in what is called bottom; in the power of making immense journeys, without pause or fatigue; and by this quality they wear out, at the long run, their swifter adversaries. According to Mr. Fraser, their powers of endurance on these long expeditions are by no means promoted by setting out in good condition. On the contrary, they are studiously reduced, till they become almost skeletons, and their flesh feels like marble; after which they will perform continued journeys of seventy or eighty miles a day without injury. They form a regular article of trade, and are in great demand for the cavalry of Persia and India. They are used, however, not merely as instruments of war and plunder, but also for economical purposes, and particularly for food. Horse-flesh, from one end of Tartary to the other, is the standing dish; and mares' milk, fermented into a liquor called *koumiss*, is almost the only liquor used for convivial purposes. The other animals of Tartary are more local, and chiefly borrowed from the adjoining districts. Eastern Tartary has in the south, the yak, the goat, and the musk-rat of Thibet; in the north, the fur-bearing animals of Siberia; but neither in such perfection as in their own proper districts.

The vegetable productions which are the objects of culture in Tartary do not materially differ from those of Europe: in the southern and milder tracts are raised wheat, barley, and millet; while the ruder northern districts, particularly of Mandshur Tartary, scarcely yield any grain except oats. On the declivities, however, of the great chain which separates Tartary from Siberia, are found some valuable and peculiar products; the rhubarb, so useful as a medicine, and which has been transplanted into Europe, without attaining the same excellence; and the ginseng, which, though it has never been valued among us, is in China and Tartary held of sovereign virtue.

Manufactures cannot be said to have any national existence in Tartary, though here, as everywhere else, the women produce some coarse fabrics for internal consumption. Among these, the principal are felt, coarse woollens, and skins, particularly of sheep, variously prepared.

Commerce, over this vast region, is on a scale not quite so limited; resting, indeed, on other resources than its own exports and imports, which are of very small amount. These wide open plains have in all ages formed the route of communication between Eastern and Western, and of late between Northern and Southern, Asia. Notwithstanding the multiplied obstacles of mountains, deserts, snows, and the more deadly impediment of barbarous nations devoted to plunder, caravans proceeding by this route have always exchanged the products of Persia and Hindostan for those of China. To avert the perils that await them, they proceed in large bodies, well armed, and purchase the protection of the princes through whose territories they pass, and who, indeed, if at all enlightened, seek rather to encourage this system of transit. Even in the second century, we find Ptolemy describing an immense caravan route across Asia from Byzantium to the frontier of China, and which probably existed long before, though it escaped the notice of earlier writers. This route varies with the disturbed or peaceful state of the countries which it traverses; but its favourite points of rendezvous seem to be Herat (ancient Aria), Balkh (Bactria), and, above all, Yarkand situated on the line which separates Eastern from Western Tartary. The tract beyond may be considered almost as unknown land, since it has been but loosely described by one or two

travellers, whose narratives are several centuries old. They mention Khoten, Koutché, Turfan, and Hami, as important points to be passed; but this route is rendered arduous by the necessity of crossing the great desert of Shamo or Cobi, which extends here for a vast distance from north-east to south-west. Of late, the Russians have opened a great trade across Independent Tartary. They have annual caravans from Orenburg to Bokhara, a commercial route, which Britain vainly attempted to open, for several centuries; and these caravans, it is said, consist frequently of 30,000 men. They frequent also the fairs of Yarkand, and some of them have even been seen in those of Thibet. From all that part of Tartary, however, which is subject to China, they are rigidly excluded. The only communication between the empires is on the frontier of Siberia, at the two towns of Maimatchin on the Chinese, and Kiakhta on the Russian side. Here the commodities of the respective empires are exchanged, under those strict regulations by which China limits all her intercourse with foreigners.

The chief trade peculiar to Tartary consists in its horses, the superior qualities of which have already been noticed. There is a small, stout, hard-working breed, selling from 5*l.* to 10*l.* apiece, exported to Cabul, and some parts of India, for purposes of husbandry. The large war-horse of Turkestan has been always in request for the cavalry, of which the armies in Hindostan and all the south of Asia chiefly consist. The demand, however, has been much diminished in India by the prevalence of the English, whose troops consist chiefly of infantry, and whose officers prefer Arabian horses.

Sect. VI.—*Civil and Social State.*

The population of the tribes roving over the boundless plains of Tartary cannot be estimated from any precise data, nor can a loose conjecture on the subject be hazarded with much chance of coming near the truth. The population of Bokhara has been stated at 3,000,000, that of Kokan at the same, that of Balkh at 1,000,000. Badakshan, Khiva, the Kirghise territory, and other minor divisions, may raise the whole of Independent Tartary, perhaps, to somewhat above 10,000,000. In regard to what is called Chinese Tartary, we are destitute of all positive data; but if we suppose the same ratio to prevail between the extent and population, we must allow to this portion double the number. Against this allowance, it may be argued, that Eastern Tartary contains immense tracts of desert, and thinly inhabited country. It is not certain, however, that these are more extensive than in its western regions; and our accounts of it, which must be confessed to be imperfect, represent various districts as fertile and highly cultivated. Under these views, we might guess the entire population of Tartary at about 30,000,000.

The Mongols and the Turks, or Toorks, the two leading races among the various tribes who inhabit this immense region, are distinguished by numerous peculiarities from each other. The Mongols, so celebrated in the annals of conquest and ravage, both under their own name and the ancient name of Huns, occupy chiefly the pastoral districts bordering on the north upon the great desert of Shamo. Their visage is strange, and almost deformed; broad, square, and flat, with high cheek-bones, the nose peculiarly depressed, small and keen black eyes, bending obliquely towards the nose, thick lips, and a scanty provision of black hair upon the head, eyebrows, and beard. Their persons are somewhat diminutive, spare, muscular, and active, and the horses on which they continually ride are more distinguished for swiftness than for size and beauty. The Calmucks, the Kalkas, the Eluths, the Burats, may be considered as branches of the great Mongol family. The Turks, celebrated for their early conquest of Persia, and for their possession of Constantinople, are a much handsomer race. They have short and stout persons; broad foreheads, high cheek-bones, small but not twisted eyes, and black hair. Their features cannot thus be considered as perfect, according to European ideas; but as they have none of the Mongol deformities, and, instead of the dark-yellow tint of the latter, have clear and ruddy complexions, their beauty is celebrated by the poets of Asia. They are divided chiefly into the Uzbeks, the Turkomans, the Kuzzauks. The Mandshurs are represented by some as exhibiting the Mongol features, with a fairer complexion; but, according to Pallas, they belong to the same class as the Tunguses. Although there be this variety in the external appearance of these races, yet the same wandering, pastoral, equestrian habits; the division into tribes; and the absolute sway of their khans, unite in fixing a similar character on all the nations who bear the name of Tartar.

Of the national character of the Tartars very various reports have been given, according to the relation under which they have presented themselves. Their delight is in war, and there is no nation that wages it on a more dreadful and barbarous system. The "scourge of God," the "terror of mankind," are the appellations by which they are known to the neighbouring empires. General extermination, without regard to age or sex, is what they consider themselves entitled to inflict on all who attempt resistance; and this is mitigated only when a profit can be made by carrying off captives, and selling them as slaves. It was said of the armies of Zingis and Timour, that they saw before them a fruitful kingdom, and left behind them a solitary desert. It was their boast, with regard to some of the proudest capitals, that they had reduced them to such a state, that a horse might pass over their site

without stumbling. A picture greatly the reverse of this has been drawn by those who have observed the Tartars, even when they were spreading elsewhere the widest desolation, displaying, in their domestic life and their intercourse with each other, the simplicity and amiable virtues of the pastoral age. They are cordial, kind, and hospitable; quarrels are rare, seldom produce fighting, and scarcely ever bloodshed. Compared with the Hindoos and Chinese, they are frank, sincere, and honest; and though they make even peaceable strangers feel the influence of a national pride, nourished by the recollection of so many victories, yet they protect them, and treat them with courtesy.

Two religions divide Tartary, and are professed with zeal through different portions. All its eastern regions acknowledge the Shaman doctrines, and the supremacy of the Grand Lama; while, ever since the commencement of the eighth century, when the countries beyond the Oxus were conquered by the arms and instructed by the preaching of the caliphs, they have remained devoted to the Mussulman creed. Under the former system, the little tribes of Eastern Asia have minor lamas, exercising a mingled spiritual and temporal jurisdiction, though not holding a supreme sway in either capacity. The original Boodhist system, also, here seems combined with ruder features; particularly magic, sorcery, and similar modes of deluding the ignorant wanderers of the desert. In the west, again, Mahometanism seems to be professed in greater purity, and with stronger bigotry, than in almost any other of the numerous regions where it reigns.

The learning of Tartary is little known, and is at best only a reflected light from the southern regions of Persia, Hindostan, and China. Yet the country is by no means involved in that thick darkness which the name Tartar suggests to an European ear. In all the Mahometan states, some of the first elements of knowledge are very widely diffused; and the few great cities contain colleges for instruction in the sciences, on as extensive a scale as those of Europe. Unfortunately, the sciences there taught form a contracted and monastic circle, nearly similar to what was professed in Europe during the middle ages. Commentaries upon the Koran take the lead of every other class of literature; and as that rude composition is the standard of Mussulman law as well as theology, the science of jurisprudence can never assume any liberal aspect. Astronomy appears merely under the character of astrology; medicine has lost all the lustre it possessed in the days of Avicenna; and, perhaps, the only solid parts of knowledge retained of those which were taught in the schools of Bagdad, are arithmetic, and the branches of practical mathematics.

Architecture, in a country of which the greater part of the population is movable, can never be expected to make much progress. The great capitals are decorated with handsome edifices, on the model of those of Persia; but none of these have attained any great celebrity. The regular abode of all native Tartars is the tent, carried from place to place with the tribe or encampment. The Tartar tent is much more commodious than that formed of black cloth, which is used in Cabul or Thibet. It is framed of close lath or wickerwork, covered with felt, and terminating upwards in the shape of a dome. These, which are often large and lofty, are placed on wagons, and conveyed from place to place, suggesting the idea of a moving city. A camp or migratory village is called onool, and consists usually of from twenty to fifty tents.

The dress of the Tartars differs materially from that of Southern Asia, and is chiefly adjusted for the production of that comfortable warmth which the climate renders desirable. The Turks wear a cotton shirt and trousers, a silken-woollen tunic, tied with a girdle, and over it a gown of broad cloth or felt. The national head-dress is a large white turban, drawn, in general, over a calpak, or pointed cap. Boots are worn at all times by all classes, poor and rich, men and women, but the rich have them of a sort of light leather, without soles or heels, forming rather a species of leather stocking, over which shoes must be worn when they go out. Every man has a knife hanging from his girdle. The women wear nearly the same garments as the men, but longer, and throw a robe of silk or cotton over all. They delight in gold and silver ornaments, and plait their hair into a long queue, like the Chinese. In Mongolia, sheepskins, dressed in a peculiar manner, with the hair inwards, are considered the most comfortable protection against the cold; and some furs, though not of the finest kind, from either Tartary or Siberia, are added.

The favourite food of the Tartars is horse-flesh, so repugnant to the taste of all other nations. The varied delicacies which cover the tables of the great in Persia and Hindostan are considered by them as very insipid when compared with a stew of this coarse aliment. Horses there, as oxen with us, are regularly fattened for the tables of the rich; but their limited number, and the higher services to which a large proportion must be put, place this delicacy, in a great measure, beyond the reach of the poor. They can enjoy it only occasionally in winter, when the scarcity of pasture obliges the camp to kill such as they are unable to subsist. Among the wandering tribes, however, an animal diet must preponderate, both from its abundance and the want of any other; but, in the absence of the above most valued kind, recourse is had chiefly to mutton. To the horse, the Tartars are also indebted for their most national and characteristic liquor. The milk of the mare is fermented into an intoxicating drink, called koumiss, which is their favourite beverage, and which physicians

have described as really very palatable and wholesome. The stern precept of the Koran is, by a Tartar interpretation, not considered as applying to this exhilarating fluid, in which the Turks, notwithstanding general habits of sobriety, indulge nearly to the utmost extent in which it can be procured. They use also bouza, a thin acidulous liquor, made from grain, and which is likewise much drunk in Arabia and Northern Africa. They breakfast on tea, which, after the mode of Thibet, they make into a thick liquid, with milk, flour, and butter.

Sect. VII.—*Local Geography.*

Subsect. 1.—*Mandshuria.*

The most eastern division of Tartary, or the country of the Mandshurs, forming the interval between China and Siberia, and bordered by the Eastern Pacific, is still less known than most of its other regions. We scarcely know it at all, unless by Chinese descriptions, which are in general meagre and pompous. It presents generally a different aspect from those immense and naked plains which characterise the centre of Asia. It appears to be diversified by rugged and broken mountain ranges, covered with thick forests, and separated by valleys, many of which, notwithstanding the coldness of the climate, possess considerable fertility. Their recesses are filled with wild beasts of a formidable character, and in such crowds as to render travelling dangerous. Wheat is raised only in the most favoured spots; the prevalent culture is that of oats, elsewhere scarcely an Asiatic grain. The product most valued abroad is the ginseng, the universal medicine in the eye of the Chinese, who boast that it would render man immortal were it possible for him to become so. It grows upon the sides of the mountains. The shores of the Eastern Ocean appeared to La Perouse covered with magnificent forests, but abandoned to nature; a singular circumstance in a region so closely bordering on the over-cultivated and crowded empire of China. The few inhabitants do not even hold any intercourse with its civilised districts; but subsist on fishing, and live entirely independent, but display a mild and excellent disposition. The great river Amoor, after rising in Mongolia, traverses the whole of this province, receiving from the south the large tributaries of the Usuri and the Songari. It abounds with fish of the finest kinds, of which the sturgeon, in particular, is found in matchless abundance and perfection. The lands upon this shore ought also, it should seem, to possess ample capacities of culture. Yet they are occupied merely by tribes of poor and wandering fishermen, and for a great extent, near the mouth, are almost a complete desert. The very few towns that exist are inhabited chiefly by Chinese, defended by Tartar garrisons. North of the Amoor, the country is Siberian, and is filled with a race of hunters, who find many valuable fur-bearing animals, among which the sable is conspicuous.

The Mandshurs are by no means wholly destitute of civilisation. They possess even a language and writing, essentially different from that of the Chinese, or of any other nation of central Asia. The language is distinguished by an excess of smoothness, which forbids two consonants ever to come in contact with each other; by a copiousness almost unrivalled; by the very varied inflections, particularly of the verb. Philologists have traced in it analogies with the languages of Southern Asia, and even with the cognate dialects of Europe. This refinement, however, seems to belong rather to some other era, or to have been imported from some other region; for the impression which Sir George Staunton received of these Tartars, immediately after he had crossed the Great Wall, was that of a very rude people. Their persons were tall and robust; but their countenances were less expressive than those of the Chinese; their manners were comparatively rude and unpolished; the same strict order and police were not maintained; and beggars, who are never tolerated in the Chinese empire, swarmed on all the roads. They were so rational as not to have adopted the ridiculous and injurious system of cramping the female feet. On the whole, though the Tartar lords hold a high and even ruling place at the court of China, the nation in general is depressed under the ascendency of the conquered state, all whose institutions have been adopted entire by the government.

The province of Mandshur Tartary, immediately adjacent to China, is called Kirin-Oula, with a capital of the same name. The most remarkable place, however, is Zheholl or Gehol, the summer residence and hunting-seat of the Chinese emperors. The gardens here are most superb and extensive, occupying a large expanse of ground tastefully ornamented. The province, however, which is reported to contain the greatest extent of productive land is that of Shin Yang, or Leaotong, bordering on Corea. There are cities bearing each of these names, and of considerable extent. This district is even reported to carry on the manufacture of a species of ornamented paper, in request at Peking. The northern region, watered by the Amoor, bears the title of Tzitzikar, or Mandshur Proper, being the original seat of that conquering race. Its towns, Tzitzikar, Nimgouta, and Saghalien Oula, are poor, and of middling extent. On the Upper Amoor is the district of Solon, inhabited by a rude race of Tartars, who take their name from it; and farther to the east is Daouria, peopled by a mingled race of Mandshurs and Mongols.

The eastern coast of Tartary does not, at any point, face the open expanse of the Pacific.

It has, parallel to it, a chain of great islands, or rather a continuous extent of continent, penetrated at different points by narrow straits, and extending for about twenty degrees from north to south. The three greatest of these islands compose the empire of Japan, the importance of which claims a separate description, and which is divided from Asia by a broad expanse of sea. Japan has only a narrow strait between it and the island of Jesso or Matsmai, which, with the neighbouring one of Saghalien, suggested to the early navigators the idea of an immense extent of continent stretching indefinitely to the east and north. The observations of Perouse and Broughton have established it to be an island, extending about 150 miles in length, and 80 in breadth. All the level coasts adjacent to their own territory have been occupied and cultivated by the Japanese; but the rugged tracts in the centre and north are still held by the natives. A strait, as narrow as that which parts Jesso from Japan, interposes on the northern side, between it and the long and narrow island of Saghalien, which, for a space of about 700 miles, faces the eastern coast of Tartary. It has now, indeed, become almost more than doubtful whether it be an island or not. European navigators have traced on the south what is called the Channel of Tartary, and on the north the bay of De Castries; but they have left in the middle a space unexplored, where the natives report that Saghalien is joined to the continent by a sandy isthmus, so small that fishermen drag their boats across it. This isthmus, if it exist, is perhaps of recent formation, and is an alluvial deposit formed by the Amoor, which here terminates its course. Although the maps of the Chinese and Japanese represent Saghalien as entirely insular, yet the want of current, and the freshness of the water on the south side of the suspected isthmus, seem to give a greater weight to the contrary hypothesis.

The inhabitants of Saghalien, and the natives of Jesso, consist of a peculiar race, called the Ainos, who possess a physical character entirely distinct from the inhabitants of the opposite coast of Tartary. Travellers, content with remarking this, have given very few particulars of their actual outward appearance, except that their persons are covered with a more ample growth of hair than those of any other race; a fact which, though Krusenstern has doubted it, seems to have a great predominance of testimony in its favour. Their occupations rank them among the rudest classes of human society. They are unacquainted either with agriculture or pasturage, and derive their sole subsistence from fishery or the chase. Yet Perouse remarked among them a degree of reflection and information superior to that which distinguishes the bulk of the people in a civilised country. He did not consider, that these precarious and adventurous employments, requiring invention and ingenuity to be always on the stretch, give much more scope to the intellectual faculties than the routine task of an European labourer. Their moral attributes he praises in still more unqualified terms; representing them as mild, peaceable, generous, and warmly attached to each other. The verdure is more brilliant than on the opposite coast of Tartary, and the sea abounds in an extraordinary degree with fish, among which whales in considerable numbers reach the coast of Jesso. They did not appear, however, to possess any materials for trade with nations at a distance so immense as those of Europe. Their only intercourse is with Japan, and with the country to a considerable height up the Amoor.

SUBSECT. 2.—*Mongolia.*

On the western limit of Mandshur Tartary commence the almost boundless plains roamed over by the tribes of Mongolia, who extend for nearly fifty degrees of longitude as far as the Lake of Balkash or Palcati. In the central portion of Tartary, a principal feature is the Desert of Shamo, or Cobi, which extends almost entirely across it. According to the best of those imperfec, accounts which we yet possess, it reaches about 2000 miles from south-west to north-east, separating like a great inland sea the countries upon which it borders. According to the report of Marco Polo, it is crossed, like the African deserts, by caravans with camels; and the real terrors of the journey are heightened by superstitious alarms, natural to those who find themselves bewildered in the depth of such an awful solitude. The traveller who chanced to straggle from the main body imagined that he heard a sound, sometimes like that of the march of a caravan, sometimes like that of music and warlike instruments echoing through the air; when, following these delusive indications, he was led astray into some perilous, and, perhaps, fatal situation. The only precise account of it is given by the Russian embassies to China, particularly that of Lange, narrated by Bell. Though a month was spent in crossing it, the breadth does not appear to have exceeded 400 miles. The ground was covered with short and thin grass, which, owing, perhaps, to the saline quality of the soil, maintained a greater number of cattle than could have been supposed. There is, indeed, a considerable number of springs and lakes, but the water is so brackish as to be scarcely potable; so that a single pure spring which occurred, tasted as delicious as burgundy or champagne. A space of twenty miles in extent immediately beyond the Chinese wall was composed of shifting and sinking sand, formed into waves twenty feet high, and the crossing of which was an operation of the greatest labour. The ground along this tract is covered with pebbles of considerable beauty, and even value.

All the habitable parts of this desert, with the tracts to the north of the Thianchan, cover-

ed with rank and luxuriant pastures, are traversed by the tribes or standards of the Mongols. This terrible race are no longer in a condition to pour over Asia the tide of conquest and desolation. They are split into a number of petty tribes separate from each other, generally hostile, and incapable of combining for any common object. They have been made to own the sovereignty of China; but that state, unable either to maintain garrisons or exact tribute, leaves them much to themselves, and requires little more than that they shall leave it unmolested. Even this is not accomplished without the payment of a small salary or tribute to their chiefs. There is not even any effective prohibition against the practice of waging private war with each other; though, when this threatens to reach any serious or perilous height, a force is levied and sent out, by whose influence terms of accommodation are dictated. The physical features of the Mongols have been already described. In their character they are rough, roaming, warlike; but in domestic intercourse, frank, cheerful, and hospitable. Their main pride consists in the management of their horses, in which they appear indeed to show a wonderful degree of dexterity. They do not attempt to rival the weight and size of the Turkish horses, but prefer those which are swift, hardy, and serviceable. They have trained them to stop in their most rapid career, and to face, without fear, the fiercest animals. As the luxuries of horse-flesh and koumiss can be commanded only to a limited extent, they supply their place with cows, and with that species of sheep having huge tails composed entirely of fat, which prevails in many parts of Asia and Africa. For amusement, they hunt deer and a few sables; but find little opportunity for fishing. Amidst all the privations to which they are exposed, they manifest a gay and cheerful disposition, and take delight in various kinds of sports and exercises. Complete converts to the religion of Boodh, they have lamas, feigned or fancied to be immortal, and each of whose places is immediately supplied after death by another, believed to be a new body animated by the same soul. They have also gheims (gylongs), or monks, by whom the religious ceremonies are conducted; and these ceremonies are observed, as in Thibet, to bear a close resemblance to those celebrated under the superstitious forms of Christianity. This ecclesiastical nobility, however, though reverenced and handsomely supported, is far from enjoying the same exclusive dignity as in Thibet. The warlike chiefs hold that pre-eminence which is usual among such rude tribes.

The Calmucks are by much the most numerous among the branches of the Mongols, and they occupy all the western portion of the region now described as Mongolian. In form, manners, and religion, they present scarcely any distinction. They appear, however, to have a more independent and regular form of government than any other Tartar nation. The khans of the different ooroghs, or tribes, meet in a general council, to elect the great khan of the Calmucks. They boast of their country as that whence issued the Huns, who acted so celebrated a part in the overthrow of the Roman empire; and they even claim the great Zingis as their countryman. In the end of the seventeenth century, they had made themselves completely the ruling people, and masters of all central Tartary, including the southern countries of Cashgar and Khoten. Being attacked, however, by the Mongols, their rivals, confederated with the whole force of the Chinese empire, they were unable to sustain the unequal contest, which ended in the subjection to China of all Tartary east of the Beloor. The Mongols, though sharing the common subjection, became pre-eminent over their rivals, many of whom, unable to brook this double servitude, sought refuge in Asiatic Russia; but the mildness of the Chinese sway has since induced a large proportion to return. The whole number occupying their original seats is now supposed to amount to about 1,000,000.

Other branches of the same widely extended race are the Kalkas, called sometimes the Black Mongols, whom Gerbillon describes as, next to the Hottentots, the dirtiest and ugliest race he ever saw; their neighbours on the south, the Eluths, dwelling round the great lake of Kokonor; and the Sifans, divided into Black and White, who occupy the head of the great rivers of China, on whose sands are found some grains of gold.

Subject. 3.—*Little Bucharia, or Chinese Turkestan.*

The region to the south of Thianchan, and of the Great Desert, although of vast extent, and including some of the finest tracts of central Asia, has remained to the moderns almost utterly unknown. The narratives of Marco Polo and Goez, the only Europeans who are recorded to have passed through it, and the Tartar histories, afford only a few scattered notices, which can be combined into nothing like a regular survey. The appellation of Tangut appears to have been extensively, though in a somewhat vague way, applied to this region, which has also been called Little Bucharia and Eastern Turkestan. According to the report, however, of our late Persian travellers, the Chinese, having driven out the native princes, have incorporated the greater part of it into the kingdom of Cashgar. This kingdom, in its original limits, forms a wide plain to the east of the great chain of the Beloor. It is described as superior in beauty and fertility to any other part of Tartary, and as rivalling the finest tracts in southern Europe. It is watered by numerous streams, descending from the high border chain; the fields, carefully cultivated, are covered with large crops of grain, and the fruits are peculiarly excellent. It is a tract redeemed, as it were, from the

general desolation of Tartary. At present, Cashgar appears to be flourishing under the Chinese sway. There, and in Yarkand, both Mahometan countries, the magistrates of that profession administer justice, and carry on all the internal affairs, while the Chinese military officers called amdans collect the revenue, and defend the country against foreign invasion. The exclusion of strangers does not seem so very rigid at this frontier as at all the others. The boundary line is guarded by a chain of military posts, at which every package brought by the caravans is carefully examined; and permission is then given to proceed to Cashgar and Yarkand, where duties of no very oppressive amount are exacted.

Cashgar is described as a handsome and ancient city, the seat of government, and, though not the chief emporium of this part of Asia, yet a seat of considerable trade. A fine river from the west passes by it, and a lead mine in the neighbourhood affords employment to a considerable number of the inhabitants. Yarkand is universally allowed to be a larger and still handsomer city. Though destroyed by Abubeker, the grandson of Timur, it speedily regained its former prosperity, and now contains 50,000 inhabitants. Its situation, indeed, seems to ensure its continuance as the centre of the inland trade of Asia, the grand medium of communication between the east and the west, the north and the south, of that great continent. Yarkand, accordingly, is a place of immense resort, and filled with numerous caravanserais for the reception of strangers. A handsome street runs the whole length of the city, entirely filled with shops and warehouses, which are kept by the Chinese, who sit on benches in front. There is also a considerable number of madresses, or colleges. The country around is described as almost unrivalled, particularly for its finely watered gardens and the excellence of its fruits.

Some other countries and cities are enumerated by Mr. Fraser and other writers as situated in Little Bucharia: Khoten, Aksou, Koutche, Eelah, Turfan, Karachar, Elchi, Karia, Guama, Kargalie, Yengu, and Hissar. Khoten is celebrated in the early histories and travels as an independent kingdom of considerable extent and importance. Its territory, besides the ordinary products, is said to contain a species of marble and jasper, beautifully variegated with flowers, leaves, and other objects, which afford a material of profitable exchange with China. Its temperate climate and fruitful soil are marked by the production of the vine and the silkworm. At a period anterior to the Christian era, the doctrines and learning of Buddhism are said to have been introduced into Khoten, and to have flourished there till they were driven out by Mahometan conquest. At present, under Chinese sway, both religions are equally tolerated. Aksou is also described by Fraser as the capital of an extensive district subject to Cashgar. Humboldt describes it as the seat of an active commerce, and gives general caravan routes, which pass through it in different directions. Eelah was the Calmuck capital, when that people were the rulers of central Tartary; it is perhaps the Cialis of Goez, described by him as a small but well fortified city, considerably to the east of Cashgar, but still in dependence upon it. Burnes assigns it 75,000 inhabitants. Turfan is also mentioned by him as a large and strong city, the capital of a considerable country, governed by a branch of the royal family of Cashgar. No recent mention is made of Peym, or Poym, which, according to Marco Polo, ought to be within the above limits. Farther to the east, that traveller has described the country of Lop, in which was a great lake where the river of Cashgar found its termination. The city of Lop formed then a rendezvous of the caravans, that here found the most favourable opportunity of crossing the Great Desert on their way to China. Beyond it, and close on the Chinese frontier, is Khamil, called Hami in the Chinese maps, represented as a peculiarly fine country, inhabited by a learned and polished people, immersed, however, in dissolute and voluptuous habits. The Mahometan religion, which has been established through Cashgar and all its dependencies, gives place here to the ecclesiastical sway of the Lama. Peculiar superstitions, the remains, probably, of an earlier system, are said to prevail in this part of Tartary. The dead are often embalmed in spices, and kept for several years till the astrologer has determined the planet under which they ought to be interred. There are lodged along with them in the tomb painted representations of men, women, cattle, money, and other objects, which it is imagined may be useful to them in the other world; a remnant, probably, of the custom prevalent among many savage tribes who bury these objects themselves along with their chiefs.

SUBSECT. 4.—*Turkestan or Independent Tartary.*

Independent Tartary, commencing at the great boundary chain of the Beloor, reaches westward to the Caspian, and is bounded on the south by Persia, and on the north by Asiatic Russia. Its chief divisions are the kingdom of Bokhara and that of Kokan, both fertile and populous when compared with the wastes by which they are surrounded; both famed and ancient seats of empire. They are situated upon, and derive their fertility from, the two great central rivers; one from the Oxus, Gihon, or Amoor, the other from the Jaxartes, Sihon, or Sirr. These states, with the khanat of Khiva, also an important power, occupying the lower Gihon, are ruled by Uzbek chiefs.

Bokhara forms a fertile oasis, extending about 200 miles along the northern bank of the

Oxus, at about the middle of that north-westerly course by which it flows to join the Aral. The principal cities and cultivated lands, however, are on the river Zurufshan, or Kohuk. The population, by the last Russian embassy, is reckoned at 2,500,000, of which a great proportion consists of fixed inhabitants, cultivating the ground, or inhabiting towns.* The bulk of these, over all Independent Tartary, as well as Cashgar and Cabul, consist of a race called Taujiks, apparently descended from an original native people reduced to subjection by the conquering tribes who at present bear sway; and the name is now generally applied to all who have adopted the same peaceable and industrious habits. The military force of the kingdom consists of 20,000 horse and 4,000 infantry, besides about 50,000 militia. The present sovereign, a warlike prince, has wrested Balkh from the chief of Koondooz; but the only expeditions in which his troops engage at present are for the purpose of plunder, chiefly over the vast plains of Khorasan. On these occasions, the party often ride for several hundred miles without intermission, till they have reached the city which is to be the object of attack. They study to arrive in the night, and watch the moment in the morning when the gates are opened and the inhabitants come out. The invaders then rush in, set fire to the place, kill all that resist, and carry the rest into slavery. Such proceedings, indeed, arise rather from the predatory habits of the Tartars, than from any peculiar impulse from the sovereign, in whose eyes, however, they are sanctioned by the consideration, that the Persians are heretical Shiahs, and therefore, by the holy and orthodox Sunites, are justly devoted to bondage. The country is well governed, peaceful, and flourishing. Cultivation is only limited by the want of water, and by the naked character of the vast plains which enclose Bokhara. A considerable inland trade is carried on with India, Persia, and, above all, with Russia. From Astrachan, two annual caravans come by way of Orenburg, each accompanied by 4000 or 5000 camels. In winter, the Oxus being frozen, they are enabled to pass it over the ice; but much hardship is experienced in consequence of the desolate character of the route, where often neither provisions nor water are to be found for several successive days. The imports from Russia are metals, arms, cutlery, cloths, and other European manufactures; the returns are in silk, cotton, hides, rubies, and turquoises.

According to Mr. Elphinstone, and the late Russian mission, the city of Bokhara contains 70,000 or 80,000 inhabitants. Burnes estimates the population at 150,000. As usual in Asiatic cities, the habitations of the ordinary citizens are poor; but there is a number of mosques, and madresses, or colleges, handsomely built of stone. Bokhara is a great seat of Mahometan learning, such as it is, and government is a liberal encourager of it. The city contains eighty madresses, each attended by from 40 to 300 students. To every madresse there is a lecturer; and these, with the students, are supported by funds consisting chiefly in the rent of lands or houses, appropriated to that purpose by Mahometan zeal and charity.

Farther up the Kohuk, and about 200 miles to the east of Bokhara, is Samarcand. Its walls still enclose a circuit of forty-eight miles: the beauty of its environs, and the delicacy of its fruits, are still extolled in the same lofty terms which were used by the writers of the middle ages. This renowned capital of Asia is now little better than a mass of ruins. Murad Bey, however, one of the princes, having fixed his residence there, has of late done something for its revival. Here is still found the celebrated observatory of Ulugh Beg, and the mausoleum of Timur, paved with green stone adorned with jewels. It is watched by a few attendants, who were liberally supported by the court of Delhi; but, since the fall of the Mogul empire, they are left in a state of extreme poverty.

The region of Balkh, situated on the north side of the mountains, forms part of the vast plain which extends to the Altaï, and, being ruled by Uzbek chiefs, it must properly be considered as belonging to Independent Tartary. Under the name of Bactria, this country has, from the remotest antiquity, been celebrated in the annals of the East. It has been, in a manner, the link connecting together the civilized and uncivilized worlds of Asia; the main point of union between them. Under the auspices of Alexander, a Greek kingdom of Bactria was formed, which continued for several centuries, and even after its fall retained some marked traces of civilization. Under the Roman empire, when a commercial route had been opened across Asia as far as China, Bactria was the grand rendezvous, before entering the bleak regions of Tartary. When Asia yielded to the dreadful sway of the Mongol warriors, whose southward track to conquest lay across the Bactrian territory, that unfortunate district became exposed to accumulated disasters. It is subject at present to the king of Bokhara. Balkh, the ancient Bactria, possesses in Asia the fame of almost unrivalled antiquity, which seems to ascend even to the age of Semiramis. It is commonly called, in the East, the mother of cities. It retains, however, a mere shadow of its ancient grandeur. Only one corner of the wide circuit which its walls enclose is now inhabited, and, according to Burnes, it does not contain more than 2000 souls. The surrounding district is flat, fertile, and well cultivated, containing about 360 villages. This fertility is produced, in a great measure, by a grand reservoir formed of the numerous waters which

*[Burnes estimates the population of Bokhara, in which he includes Balkh, at 1,000,000 souls.—Am. Ed.]

descend from the southern side of the Paropamisan mountains; a single canal derived from which is said to yield a revenue of 9000*l.* sterling. As this source of fertility dries up, the country to the north declines into those sterile and naked plains which compose the greater part of Tartary.

The tracts between the Oxus and the Jaxartes partake of the rudest character of Tartary, and are occupied only by bands of wandering Turkmans. The waters of the latter river, however, fertilise the kingdom of Kokan and Ferganah, similar in cultivation and improvement to Bokhara. Omer Khan, a Mahometan prince, cultivates peace, and is mild and beneficent in his internal administration. Kokaun, or Kokan, of modern origin, and recently made the capital, has risen from a small village to a city of 50,000 houses, with 300 mosques. It lies in a fruitful plain, watered by two small rivers. Kojan, the ancient capital, though decayed, is still more than half the size of Kokan. Its situation on the Jaxartes is described as truly delightful, and its inhabitants as the most learned and polite of any in this part of Tartary. Taschkend is an ancient city, still very flourishing, and estimated, in Humboldt's itinerary, to contain 100,000 inhabitants, with 320 mosques. Murgilan is a large and fine city, described even in some routes as the capital of Ferganah. On the frontier towards the Kirghises is Ush, a populous town, the inhabitants of which have succeeded in reclaiming from roving habits a great proportion of that barbarous race, who are now peaceably settled round them.

Khiva forms still another kingdom of Independent Tartary, once a seat of empire, and still considerable. It is situated on the lower Oxus, separated by a wide interval of desert from that of Bokhara. This country was the first in Tartary that was converted by the sword to the faith of Mahomet; which, about 710, the conquering Catifah preached in the mosque of Kharism. This last name became afterwards that of the kingdom, of which Urgunge was the capital, as well as of an empire extending over a considerable portion of Asia, but which was subverted by the arms of Zingis Khan. After being destroyed by Nadir Shah, it was rebuilt and made the capital of the present kingdom, the cultivated part of which extends less than 200 miles in length, and 50 in its utmost breadth, along the banks of the Oxus. The canals derived from that river are the chief means by which cultivation is produced. To Khiva, also, is loosely attached the roving population of those immense deserts which, on every side, insulate it from the civilised world; from Persia, from Candahar, and from Bokhara. Travellers across these wastes find only at wide intervals a few spots affording water and pasturage. That there exists, however, in their recesses a greater number of these oases than the routes across them would indicate, is proved beyond a doubt by the multitudes whom they pour forth for the purposes of war and plunder. The population of the whole territory has been reckoned at 300,000 families, of whom about a third are fixed, the rest wandering, pastoral, and predatory. These last roam usually through their deserts in a state of wild independence, under hereditary chiefs, yet are ever ready to join any standard, either of their own sovereign, or of Persian revolted chiefs, under which they may promise themselves adventure and booty. At present, as nothing on a great scale presents itself, they are principally employed in desolating Persia, and particularly Khorasan, by plundering expeditions, in which they not only carry off every thing valuable, but the inhabitants themselves to perpetual captivity in the heart of their immense deserts.

The settled inhabitants of Khiva are described as gross and uncivilised, when compared either with the Persians or with the Tartars. They indulge in gluttonous excesses, foreign in general to Oriental habits, and the persons of the chiefs are in consequence corpulent and overgrown. Their situation enables them to carry on some trade similar to that of Bokhara, though on a smaller scale. One branch they have extended much farther, that of slaves, if trade it can be called which consists merely in selling the unfortunate victims whom they have obtained by violence. Mr. Fraser heard it estimated that there were in slavery, throughout Khiva and Bokhara, from 150,000 to 200,000 Persians, and 15,000 Russians.

The city of Khiva is situated about fifteen miles to the south of the Oxus, and contains about 5000 families. It is poorly built, and is, indeed, rather a fixed encampment than a regular town. Even the palace of the Khan is only a large wooden tent plastered with clay. Urgunge, the ancient capital, is almost in ruins, though its situation on the Oxus still preserves to it a little trade. Hazarasp, a place distinguished in the revolutions of Asia, has experienced an equal decay.

[Between Cabul and Bokhara, to the south of the Oxus, is the little state of Koondooz, ruled by an Uzbek chief or Meer, who has established his power over all the neighbouring districts; he holds Khooloom, Heibuk, Ghoree, Inderab, Talighan, and Tluzrut-Imam, and is master of the valley of the upper Oxus, and its tributaries. He has reduced Badakshan, and several of the hill districts north of the Oxus, and has even sacked the city of Balkh—. Moorad Beg, the Meer of Koondooz, has a force of 20,000 horse, and renders himself formidable to his neighbours by his activity and his vigorous policy. The town of Koondooz is situated in a marshy valley, proverbial for its unhealthy climate, and is visited by the

Meer only in winter; it was once a large town, but the population does not now exceed 1500 souls. Khooloom, or Tash-Koorghan, is agreeably situated in a fine district, and contains about 10,000 inhabitants.—Am. Ed.]

The long mountain valley of Badakshan, situated between the Beloor Tagh, and a high branch thrown out from it, called the Ridge of Pamere, remains to be described. At the loftiest meeting point of these two chains, in a glacier called Pooshtee Khur, the Oxus rises, and, flowing along the whole of Badakshan, collects from its mountains a mass of waters, with which it proceeds to force its way through the deserts of Tartary. Badakshan is celebrated over the East for its mineral products; iron, salt, sulphur, lapis lazuli; but, above all, rubies considered equal to any in the world. The mines are situated in the lower part of the Beloor, near the Oxus. According to Mr. Elphinstone, they are no longer worked; but this, according to Burnes, is a mistake. Badakshan is dependent on the Meer of Koondooz. The capital is Fyzabad, on the Coacha, a mountainous tributary to the Oxus.

Contiguous to Badakshan, on the opposite side of the Oxus, is the district of Derwauz, the king of which claims a descent from Alexander, which his neighbours are said to admit; probably on very slender testimony. West of this is Shoghnan, which anciently conveyed to the whole of this mountain tract the name of Sogdiana.

In order to complete the picture of Tartary, we must take a view of that northern region, bordering on Asiatic Russia, which is covered with the flocks and tents of the Kirghises. This remarkable race does not figure in the early revolutions of Asia. They appear then to have chiefly occupied the pastoral regions of Siberia, on the Upper Yeniseï. When the Russians invaded these regions with a force which undisciplined warriors could not resist, the Kirghises, after a desperate struggle, yielded without submitting. They retired over the mountains into the wide uncultivated plains or steppes which extend to the north of the Jaxartes and the east of the Aral. They are divided into three branches or hordes, called the Great, the Middle, and the Little Horde. The Great Horde ranges to the east and south on the frontiers of Cashgar and Kokan, and many of its tribes have adopted the habits of those more improved districts, and acquired a fixed and peaceable character. Only some of the high separating ranges contain about 50,000, who are called wild or mountain Kirghises, and entirely merit the name. The Middle and Lesser Horde occupy the shores of the Aral, and the tract extending from the Aral to the Caspian, and in these the original nomadic and pastoral character is preserved most entire. They own, in a certain sense, the sovereignty of Russia, which, however, must have recourse to measures both of conciliation and defence, to prevent them from making extensive depredations in its territory. In the former view, it grants pensions to the principal chiefs, of whom the khan receives annually 600 rubles and 20 camels; the rest in proportion; and it maintains a chain of strong posts along the whole line from the Ural to the Irtysch. This does not preserve the frontier from occasional inroads; still less does it secure from plunder the great caravans which carry on by this route an intercourse with the central countries of Asia, and which can ensure their safety only by the humiliating expedient of a tribute, usually of ten or twelve rubles for each camel.

In their social and political capacity, the Kirghises enjoy a greater share of independence than most of the other tribes of Middle Asia. The Little Horde, indeed, allows Russia to appoint a nominal khan; but he enjoys scarcely any power, unless what he can secure by wealth or personal qualities. The main authority rests with the little khans who are at the head of each clan, and the union of whom with the old men constitutes a sort of democratic assembly, by whom the great affairs of the nation are determined. Yet the slowness and indecision incident to such a body renders it less formidable in war than those which are commanded by warlike and absolute chiefs. The private life of the Kirghises is directed by the maxims of Mahometan law, of which they are strict but not learned observers. Under its sanction the chiefs observe polygamy to as great an extent as purchase or robbery can enable them, and a separate tent is allotted to each wife. The wealth of the Kirghises consists in horses, goats, the large-tailed sheep (which afford very delicate food), and a few camels. In these respects their possessions are said to be often very considerable. Their tents of felt are both larger and neater than those of the Calmucks, and one of them will often accommodate twenty persons. It has been chiefly, as yet, by plunder or contribution that they have obtained foreign luxuries; but some, adopting more peaceable habits have begun to obtain them by the exchange of furs, hides, and felt.

CHAPTER XI.

RUSSIA ON THE CASPIAN.

The Urals form the western boundary of that main body of Asiatic Russia which is denominated Siberia. Between them, however, and the confines of Europe on the west, Persia and Turkey on the south, intervenes a region of considerable extent and remarkable character, over which sway is claimed, and in some rude manner exercised, by Russia. It

consists of two portions, which, though considerably differing in aspect, circumstances oblige us here to combine.

SECT. I.—*General Outline and Aspect.*

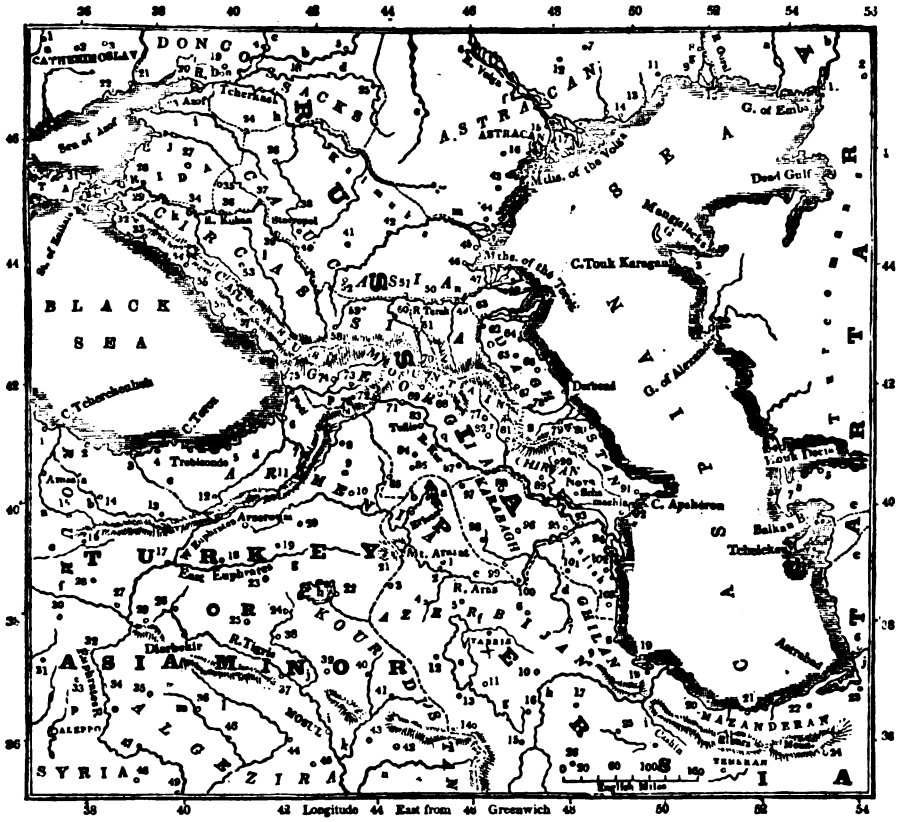
In this territory the most prominent and connecting object is the Caspian. It is the largest inland sea in the world. Its greatest dimension reaches almost due north and south, and in this direction its extent appears to be upwards of 600 miles. It has an extreme breadth of 300; but this occurs only in the great bay or projection at its north-east extremity: everywhere else the breadth varies from 90 to 120 miles. This mighty inland expanse is supplied on the north by the Volga, which, after traversing, in a course of 2000 miles, the whole of European and part of Asiatic Russia, pours in the united waters of those vast regions. On the west it receives ample streams from the mighty peaks of Caucasus and Ararat; the Kouma, the Terek, the Aras, the Kizil Ozen, and some others, reach a certain magnitude; but in general these rivers are too near their source to attain any great expansion, and they arrive chiefly in the form of mountain torrents, descending from the long range of snowy heights. On the south, the streams descending from the Elburz, are of moderate length, but copious and rapid. On the east the Attruck enters the Caspian; but by far the greater portion of this border consists of arid and dreary deserts, from which the Caspian Sea does not derive any accession to its magnitude. Considering the large sources which supply this great interior sea, many inquirers are at a loss to determine how they can be disposed of. Hence has arisen the theory of a subterraneous passage, by which its superfluous waters are conveyed either to the Black Sea or the Persian Gulf. As, however, the facts on which this theory rests seem derived from the most superficial observation, so the difficulty which gave rise to it appears more imaginary than real. Evaporation from the surface so immense may satisfactorily account for the waters received from all these rivers, of which only one is of the first magnitude. Its surface is supposed to have become lower within the last 200 years, and it certainly appears to be about 300 feet beneath that of the Black Sea.*

The waters of the Caspian, unless at the immediate influx of the great rivers, are as salt as those of the sea, with the admixture of a bitter taste, arising from a portion of Glauber salt, supposed to be produced by the decomposition of the naphtha which is found on its shores in considerable quantity. The navigation is very dangerous, particularly in the northern part, on account of the heavy and sudden gales which descend from the high cliffs of the western shore, and of the rocks and shallows with which this quarter abounds. There are no good harbours from Astrachan to Derbend. A cluster of considerable islands occurs in the Gulf of Balkan, on the eastern coast; and a number of small ones extend along the north shore, but none of much importance, considering the magnitude of the sea. An immense quantity of fish, particularly sturgeon, is taken in the northern part.

Of the shores of this great sea, the southern belongs to Persia, the eastern to Independent Tartary and to the country of the Turcomans. The western and northern only are proper to the region we are now to delineate. Between the former and the Black Sea extends a wide region entirely covered with those lofty chains to which the ancients applied the name of Caucasus. In height, in ruggedness, and in the variety of their aspects, though not unrivalled, they are surpassed by few in Asia, or in the whole world. This great range of high land may be stated, generally, at about 400 miles in extent from north to south, and 300 from east to west. Its greatest breadth and elevation appear to take place in the northern border of Georgia, where the Elburz rears its gigantic summit. M. Kupfer, lately sent by the Russian government, on the suggestion of General Diebitsch, to measure its altitude, determined it to be about 16,500 English feet, which is considerably higher than Mont Blanc. He was only able to approach within 2000 feet of the summit. The boundary of perpetual snow is about 11,000 feet, which is considered higher than in any other chain, except the Himalayah. "This central chain of Caucasus," says M. Kupfer, "is entirely formed of porphyry. Imagine a plateau, 8000 or 10,000 feet high, extending from east to west, rent in every direction by deep and narrow valleys, and traversed lengthwise by a ridge of rugged and picturesque rocks, whose summits are covered with eternal snow; figure about the middle of this ridge an excavation very broad, but not deep, the centre of which is occupied by a cone which might be believed to be entirely formed of snow, did not the naked rock, which it covers, occasionally appear: this is Elburz, whose height surpasses, by 3000 or 4000 feet, that of all the surrounding mountains." The Caucasian territory formed, for a century, the debateable ground between the empires of Russia and Persia; and the greater part of it, after having been an undisputed, though somewhat turbulent, appendage to the latter, has, unless in some rugged mountainous districts, yielded to the powerful arms of the European invader.

The tract of Asiatic Russia to the north of the Caspian, enclosed between the Volga and the Ural mountains, is of a different character. The immediate shores, composed of the deltas of the rivers Volga and Ural, and forming the province of Astrachan, are flat and

* See note on page 436.



References to the Map of the Countries on the Caspian.

RUSSIA.

1. Alexandrovsk
2. Oriatkov
3. Kermentchik
4. Koudrioutchevsk
5. Nagavsk
6. Tchernoitar
7. Beiloi
8. Baksseva
9. Lebedevo
10. Gouriev
11. Kopmskoi
12. Tchiptchinsk
13. Bieloujei Kosie
14. Eruk Aman
15. Dournovsk
16. Bachmatchchaci
17. Astrachan
18. Koumschatzk
19. New Tcherkusk
20. Taganrog
21. Mariopol
22. Petrovsk
23. Vodina
24. Postoialoi
25. Katelnikov
26. Kazsipnoi
27. Kirpilskaia
28. Atchouiff
29. Kopil
30. Taman
31. Enikale
32. Anaeopia
33. Teka
34. Ekaterinodar
35. Novomalorossisk
36. Labinsk
37. Kavkask
38. Bezopasnoi
39. Derjarnoi
40. Temnolicsk
41. Alexandrov
42. Madniarei
43. Batkalie
44. Bielom Ozer
45. Koumsk
46. Koulpitchia
47. Kisliar
48. Alexandria
49. Tchodrim
50. Kozilar
51. Mozdok
52. Georgievsk
53. Sagouran
54. Soubaschi
55. Mamai
56. Kentchili
57. Soukoum
58. Misost
59. Tembico
60. Talarup
61. Vladikaukas
62. Tilbek
63. Temir
64. Tarki
65. Dungreti
66. Oshemish
67. Schacharie
68. Chartch
69. Anumur
70. Koby
71. Gori
72. Surami
73. Scander
74. Kotais
75. Anacria
76. Akalzike
77. Telav
78. Richa
79. Tsugul
80. Niezabad
81. Belakani
82. Sisnag
83. Teflis
84. Lambeli
85. Gumri
86. Bekant
87. Dzegamskol
88. Ganja
89. Kabele
90. Vanka
91. Baku
92. Eshek
93. Djabal
94. Salian
95. Bait
96. Shusha
97. Kilkila
98. Taliv
99. Sapkolan
100. Andovar
101. Germi
102. Lenkoran
103. Astara.

Rivers.

a Dnieper
b Don
c Donetz
d Sal
e Sarpa
f Volga
g Oural
h Manitch
i Eia
j Tchelbasia
k Kuban
l Laba
m Kouma
n Terek
o Koisou
p Rioni, or Phaz
q Kur
r Alason
s Samur.

TURKEY, or ASIA MINOR.

1. Samsoun
2. Eunieh
3. Keresoun
4. Tireboli
5. Rizeh
6. Batoum
7. Gol
8. Zurdani
9. Kars
10. Mushko
11. Olti-i
12. Baibout
13. Karabissar
14. Nicsar
15. Tokat
16. Sivas
17. Snarvier
18. Jebakshur
19. Malazghird
20. Delibaba
21. Bayazid
22. Van
23. Moush
24. Betlis
25. Erzen
26. Ardis
27. Malatia
28. Hassan Chelobi
29. Simeat
30. Scinhair
31. Marash
32. Samisat
33. Aentab
34. Bir
35. Harran
36. Ras el Ain
37. Jezirah
38. Sert
39. Amadieh
40. Julamark
41. Ranba
42. Koi Sanjak
43. Erbel, or Arbel
44. Sinjar
45. Hadhr
46. Obeidia
47. Racca
48. Resafa
49. Der.

Rivers.

a Jekil Irmak
b Shawr-mawggi
c Keresoun
d Teboreh
e Kizil Irmak, E. branch
f Koremoz
g Euphrates, E. branch
h Van Lake
i Tigris
j Khabour
k Zab
l Hual
m Khabour
n Little Zab
o Euphrates
p Coich.

PERSIA.

1. Nakshivan
2. Abbasabad
3. Arajik
4. Khoi
5. Marand
6. Akhar
7. Ardebil
8. Sengar
9. Seial
10. Mianeh
11. Maraghe
12. Ouroomia
13. Mamian
14. Sar Balagh
15. Tabvar
16. Takti Sulimen
17. Zunjan
18. Reshd
19. Enzellee
20. Koumabad
21. Amol
22. Saree
23. Astrabad
24. Asseran
25. Abhar
26. Dehdeheu.

Rivers.

a Lake Erivan
b Zengui
c Aras
d Kara Sou
e Lake Ouroomia
f Augi
g Jigatti
h Kizil Ozen
i Schaherzai
j Attruck.

TARTARY.

1. Ras Engoubai
2. Ras Aba
3. Mangislacks Port
4. Krasnovodskaiakoea
5. Sulmen
6. Kabil
7. Balkou
8. Kooroosoofee.

Rivers.

a Gorkaia Sogio
b Emba.

marshy. Farther north, the provinces of Oufa and Orenburg rise insensibly into a mountainous elevation, till they terminate in the declivity of that great chain which separates Europe from Asia. Here these regions participate in the rich metalliferous character which distinguishes Catharinenberg and the other districts on the Asiatic side.

SECT. II.—*Natural Geography.*

SUBSECTS. 1. and 2.—*Geology and Botany.*

The Geology and Botany of this region have no features distinguishing it from those parts of Tartary and Siberia which lie under the same latitude.

SUBSECT. 3.—*Zoology.*

The Zoological tribes, which appear to have had their origin from the towering elevations of Caucasus, have been so frequently mentioned in the preceding pages, that little more need be said on their general nature. There is reason to believe, that around this lofty chain of Alps are concentrated most of those quadrupeds whose geographic range has been assigned to Europe; and representations of others, whom nature has given to western and southern Asia, and the confines of Africa. But the Fauna of these interesting regions is so deplorably defective, that much remains to be investigated before this theory can be received with confidence.

The Quadrupeds mentioned by travellers as inhabiting the Caucasian regions are the Caracal Lynx, the Chamois and Ibex Goats, Bears, several Antelopes, and a species of small Tiger of an unknown race. The true Bison, so long extinct in Europe, is still sheltered in these wild recesses; and the Ovis Ammon, or wild Asiatic Sheep, extends from Central Asia to Caucasus. The Ibex of these mountains is distinct, however, from that of Europe, to which it appears superior both in strength and agility; there is also another species (*C. Ægagus* Pallas) differing from both the former in its horns; and more closely resembling our domestic goat.

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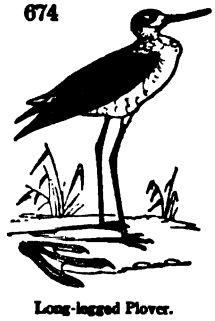

Long-legged Plover.

On the warm shores of the Caspian is found that rare British bird, the Charadrius himanlopus, or the long-legged Plover (*fig.* 674.), together with most of the aquatic species known in Europe; nor can we point out a more interesting subject for philosophic inquiry, than the affinities which these countries appear to exhibit between the animals of Europe and of Asia.

SECT. III.—*Historical Geography.*

The tribes inhabiting this tract have always been regarded as dwelling on the outer border of the civilised world. They attracted, indeed, the notice of nations with whom they were in somewhat close vicinity; but their annals have never assumed a regular or connected form. The Greeks viewed them only in dim and romantic distance, and considered the cliffs of the Caucasus, and the shores of the Mæotis, as the wild and extreme boundaries of nature. The poets painted Prometheus chained by the wrath of Jove to these awful rocks. The expedition undertaken to this quarter in search of the golden fleece was considered as exalting almost to the rank of demigods the daring mortals by whom it was achieved. Afterwards the southern borders of Iberia and Colchis became better known, and were even noted in the revolutions of Asia. Their rugged and inaccessible tracts served occasionally as the refuge of the vanquished, while they deterred even the boldest conquerors from an attempt to subdue them. It is believed that these recesses still enclose races whose habits and language bear the stamp of very high antiquity. Etymologists have even conceived themselves able to trace many of the radicals of that original language which, under varied forms, has spread from the East through Europe. It is much more probable, however, that the rugged seats of the Caucasus afforded shelter to these ancient races, than that they were the source whence population and language originated.

In modern times, Georgia, the most powerful of the Caucasian kingdoms, has been distinguished by its contests for independence with the Persian empire, and subsequently as the main theatre of contest between that empire and the rising power of the czar. Russia, after a pretty long struggle, has secured the whole western shore of the Caspian, and all the level tracts between it and the Black Sea. Even the rude mountain tribes are obliged to own a certain homage; but this, as well as the accompanying tribute, is scanty, and fully compensated by the frequent plundering excursions, against which the Russians with difficulty guard by cordons of troops drawn along their border. Georgia, and still more Circassia, has been distinguished for the athletic strength of its men, and the fine forms of its females; in consequence of which qualities, they have been in great request as domestic slaves over all the Turkish empire. In Egypt, particularly, the offspring of those slaves,

kept up by continual accessions, long maintained, under the appellation of Mamelukes, a sway superior or paramount to that of its Turkish masters.

Turkey possessed, till lately, some ports and districts on the shores of the Black Sea, which enabled her to carry on a considerable traffic, especially in slaves, and also to foment insurrection among the rude mountain tribes. As, however, she has been obliged by the late treaty to cede to Russia the ports of Anapa and Poti, with the districts of Guriel and Akalzike, she may be considered as having entirely lost her hold of the Caucasian territory.

Sect. IV.—*Political Geography.*

It has already been observed, that nearly the whole of this territory owns the sovereignty of Russia. That power, to the extent of its means, seeks to establish around the Caspian the same despotic system by which its other territories are governed. Many circumstances, however, render this, in its full extent, impossible. Over a dominion extending amid inaccessible cliffs, buried in snows, or on boundless plains traversed by wandering shepherds, the most absolute ruler is obliged to slacken the rein. Provided the Circassian tribes yield a certain form of submission, or even remain peaceable, they suffer little disturbance in their domestic economy, which proceeds upon principles very different from those which prevail among the servile nobles of Russia. The same proud aristocratic ideas, and the same value for the distinctions of birth, reign here which prevailed in Europe during the feudal ages. The lower ranks, who till the ground and perform all the menial offices, are nearly in the condition of serfs, or slaves, who, in many cases, may be, and are, sold for the profit of their masters. The fighting part of the population, again, consists chiefly of voluntary and attached vassals, the companions in peace, and the followers in war, of the head of their tribe. In the southern districts, especially where the Russians must court the natives as their allies against Persia, they are obliged to allow them the unrestrained exercise of their national propensities. To the north, again, the vast plains on every side of Astrachan are continually traversed by Calmucks, Nogais, Kubans, and other Tartar tribes, who, though they may be brought to yield an enforced homage, could never brook a daily interference in their interior concerns. These are administered by their khans, who collect and transmit such scanty tribute as can be drawn from the flocks and herds of their humble vassals. Thus, in all the wide regions around the Caspian, Russia holds full military occupation of the leading positions; but she is obliged to allow to all the natives, not indeed any solid or rational liberty, but that rude and proud independence which, in their eyes, is more precious. It is only in the northern provinces of Oufa and Orenburg, where cities with a civilised population and extensive mining establishments have been formed, that she has been able to mould the people to that uniform subjection which prevails in other parts both of her European and Asiatic territory.

Sect. V.—*Productive Industry.*

The wealth and industry of this region will not afford scope for very copious details. The Caucasian region presents to the scientific enquirer a varied and interesting vegetation, but a scanty portion of those products which are subservient to the uses of life. Even the lower valleys of Georgia and Mingrelia, though endowed by nature with extreme fertility, are little improved. The inhabitants, ill disposed of themselves to industrious culture, are moreover liable to the almost continual ravage of war and predatory incursion. Their supply of arms and of foreign luxuries is chiefly derived either from plunder, or from the sale of their people as slaves. Wine in considerable abundance, though of middling quality; a little silk from the low southern districts; some skins and furs from the higher, and fine honey from the declivities of the hills, nearly complete the list of their commodities which are fit for the purposes of trade.

Ever since Russia became at all civilised, Astrachan, at the head of the Caspian, has been of some importance as a seat of commerce. Two spirited attempts, indeed, were made by the English, one in the sixteenth century, and the other in the eighteenth, to establish a factory there, and open thence a communication with the interior of Asia. The leading object was a share in the commerce of India, which, in consequence of the occupation of all its ancient channels by the enemies of Christianity, had found out this circuitous and difficult line by the north of Persia, and across the Caspian to the Crimea. It was found, however, that Indian commodities could now be more cheaply conveyed by the new maritime channel of the Cape, and even by the Euphrates, to Aleppo. The secondary object, of exchanging the raw silk and precious stones of Persia for English cloth, was baffled by the cruel civil war which distracted and impoverished that kingdom. Even the great extent of land and river carriage across Russia, with the jealous caprice of a despotic government, would have presented insurmountable obstacles to the regular maintenance of such an intercourse. Astrachan, therefore, was in both cases abandoned, and has been left to carry on the little trade which can belong to the vast and desolate regions that stretch round it on every side. The Volga, indeed, after traversing all European Russia, and receiving many great tributaries,

must bring down articles of some magnitude,—timber, flax, iron, copper; but these find not in the round of the Caspian either any adequate demand, or any means of obtaining copious returns. One of the chief sources of wealth consists in the immense quantity of fish which both the sea and its tributary rivers supply. The sturgeon is particularly excellent, and from it is manufactured the caviare, which is considered a delicacy over all Europe. To the north, the provinces of Oufa and Orenburg, as already observed, contain mines of considerable value, the management of which is intrusted to the general board at Catharinenberg, on the opposite side of the Urals.

SECT. VI.—*Civil and Social State.*

As the countries of the Caucasus have ever been little accessible to the rest of the world, the social existence of their inhabitants, modified neither by conquest nor foreign communication, presents many picturesque and varied aspects. Indeed, there is, perhaps, no part of the earth, in which rude and barbarous life appears under a greater variety of forms. As these are, however, in many respects dissimilar, and as society is split into a multitude of small tribes, the subject ramifies into a variety of details, which will be better given under the local division. In general, all these tribes profess the dogmas of the Mahometan faith, though in a somewhat loose manner, free from the tame and mechanical routine which that religion prescribes. Scarcely any of them possess among themselves, or have imbibed from the Russians, the smallest tincture of literature. They are almost universally addicted to habits of plunder,—that national plunder, on a great scale, which is considered rather a boast than a disgrace, and which is generally familiar to rude tribes who live in the vicinity of more opulent nations.

SECT. VII.—*Local Geography.*

In treating the details of this part of Asia, we shall begin with the regions of Caucasus, which present the grandest natural features, as well as the most peculiar and striking forms of society. The Kuban and the Terek are considered its northern boundary. Within this river-line the country presents a continuation of those vast pastoral steppes which compose southern Russia. In approaching them, however, the traveller descries the mighty precipices of Caucasus rising before him. Its highest ranges are clad in perpetual snow; beneath is the black region of rocks and precipices; while the lower declivities contain a number of well-watered valleys, forming fine pastoral districts; and, though not capable of high culture, yielding plentifully the inferior products, maize and millet. In these mountain valleys dwell the Circassians. This race have been peculiarly celebrated for their physical qualities. The men, though spare, are tall, handsome, and athletic. But it is the fine form and delicate complexion of the female Circassians, which form so wide a theme of Eastern panegyric. In these high valleys, with a northern exposure, they do not suffer that intense heat of the sun, which produces, generally, the dark tints of Asia. The daughters of all above the rank of slaves are exempted from oppressive or degrading labour, and merely occupy themselves in sewing, embroidery, and the plaiting of straw. Their beauty seems also to be the result of a careful study of all the circumstances which tend to produce or preserve female charms. The face is carefully shaded from the sun; they are fed moderately on milk and pastry; their feet are protected from injury by a species of wooden shoe; and their hands by the use of gloves. Some even make use of paint, but this is considered discreditable. The value set upon their virtue is marked by the barbarous precaution of a broad leathern girdle, fastened at an early age with silver clasps, and which the husband cuts through at marriage.

The distinctions of rank and birth are observed in Circassia with all the strictness of highland pride. Under the prince, or sovereign, are the uzdens, or nobles, who attend him in war or foray, but exercise a sway almost absolute over their own immediate vassals. They are of two kinds,—bondsmen, who cultivate the glebe, and armed retainers, who attend him to the field; which last have often been raised, on this condition, from the inferior rank. The arrangements for marriage and education are of a most peculiar character, founded on a sort of Spartan apathy, which tramples upon every tender and domestic tie. Until after the birth of the first child, the husband and wife live entirely separate, and never see each other, unless by stealth; the husband considers it an insult if the wife be even named in his presence. The child, when born, is never reared in the house, or under the eye of his parents. At the age of three or four, some friendly nobleman receives him, and undertakes the sole task of educating and rearing him. Under him the sons are trained in all manly exercises, and the females in those which belong to their sex, until the former is ready to take the field, and the latter to receive a husband, which this foster father is bound to provide. Then, and not till then, they are allowed to see their parents, to whom they have before remained strangers. This violent and fantastic mode of escaping the dangers of effeminate indulgence does not seem to be here inconsistent with that nurture, for which full confidence is elsewhere reposed only on the parental care.

The noble Circassians lead that sort of life which is usual with independent chiefs on their

own estates, and surrounded by their vassals; a round of war and feasting, of hunting and jollity. Especial pride and care are manifested respecting their horses, whose parentage they consider almost equally important with their own. At the birth of the foal, a black mark, indicating its pedigree, is burnt upon the thigh, which cannot be effaced or altered under pain of death. As these noble animals are wanted both for ornament and use, they must unite the qualities of beauty, strength, and fleetness. On the armour, also, no cost is spared. The modern musket and pistol are combined with those of a former age; and a coat of mail, often proof against pistol-shot; a helmet of polished steel; a bow and quiver. As these, besides being of the finest materials, are, in the case of uzdens, ornamented with pearls and precious stones, their value amounts often to 2000 roubles. Besides the ordinary occupations of war and predatory excursion, these arms are employed in enforcing the right of private revenge, which, as in all barbarous societies, where no other mode of redress exists, is confided to the sword of the injured person, or that of his friends. With these habits of violence is combined, as usual, an almost romantic hospitality. When a stranger has been once admitted to draw a mouthful of milk from the breast of the mother of the family, he is under the protection of the house, and considered as one of its members.

The only estimate of the population of Circassia, which we have met with, is that of Pallas, who reckons the number of uzdens at 1500, and their fighting vassals at 10,000. This number would seem to be under the truth, unless it were restricted to the great Kabirdi, who form the principal tribe, and that which approaches nearest to civilisation. The serfs, or labouring part of the community, must, of course, exceed in number both the two classes mentioned above.

The Russian territories everywhere border upon, and enclose, Circassia; yet the valour of its inhabitants, and the rapid movements of the light cavalry of which its bands are composed, have set at defiance every effort to reduce it to a state of regular subjection. The Russians, on the contrary, are only able, and that somewhat imperfectly, to protect their own confines from inroad by a chain of strong fortresses. These are chiefly erected along the Terek and Kuban, two considerable streams, which, rising among the loftiest heights of Caucasus, flow for about 400 miles, first north, then the former east, till it falls by numerous mouths into the Caspian, the latter west into the Black Sea. Mozdok, on the Terek, is the centre of this line of defence; a town of 3000 people, with a strong garrison. Georgievsk, on the Kouma, is a fortress of smaller magnitude. Near the sources of the Terek is Vladi-Kaukas, "the ruler of Caucasus," situated amid the loftiest of its snowy pinnacles, and the fiercest tribes by whom they are tenanted. Though defended only by palisades and a wall of earth, it is sufficient to repel their unskilful assaults. It serves at once to bridle those fierce mountaineers, and to secure the route to Teflis, which, however, cannot be safely undertaken without an escort of upwards of a hundred Cossacks. Formerly a great part of this road lay along steeps so rugged that there was not even room for a traveller to pass on foot between the river and the cliffs, and he was obliged to make his way by projections along their perpendicular sides, crossing, too, many imperfect bridges, that were often swept away by the rapidity of the stream. But the Russian government lately caused to be constructed, from the fort of Dariel to that of Vladi-Kaukas, a secure road, 51 versts long, with only two bridges; and, though rocks were to be blown up, hills levelled, ravines filled, and large dikes constructed, this great work was completed in five years.

The baths of Caucasus are situated about thirty miles to the south of Georgievsk, at the foot of one of the lower mountain ranges. They are very numerous, extending over a space of about twenty miles. They are of various qualities, sulphureous, chalybeate, and acidulous; and the principal one is described by M. Godet as so copious as to discharge about a million of pints in the twenty-four hours. They were scarcely known till the first journey of Pallas, but are now much frequented during the months of May and June, and commodious buildings have been erected, both by government and private individuals. In this vicinity is the Scots colony of Karass, which is in a flourishing state; though the missionary station established there has not answered expectation.

The lower course of the Terek, through a fertile country, presents some interesting objects. Its commerce is chiefly carried on by Kislar or Kisliar, a town described by M. Godet, in 1828, as containing 2000 houses, and about 10,000 inhabitants, of whom 8000 are Armenians. This race, sober and industrious, founded the city in 1736, and carry on all its trade, by which they place themselves in easy and even opulent circumstances. The country round produces 40,000 hogsheads of wine, of 500 pints each; but it is of indifferent quality, and three-fourths of it is made into brandy. Silk is also produced in large quantity. [To the south, stretching along the western coast of the Caspian, lies the mountainous province of Daghestan. Its fertile soil is but imperfectly cultivated, and its long coast presents but few harbours. Tarki is favourably situated on the sea, but the principal place is Derbend, an old town, long the bulwark of the Persian empire, and still exhibiting imposing military works. It is now much sunk, having, according to Klaproth, a population of about 4000 families.—Am. Ed.]

On the opposite or southern declivity of the Caucasus extends the famous and once pow-

erful kingdom of Georgia. The world, perhaps, does not contain a region more profusely gifted both with richness and beauty. Numberless streams, flowing from the central and loftiest parts of the chain, irrigate and fertilise all its borders. On the sides of the mountains hang magnificent forests of beech, ash, chestnut, oak, and pine; and the ground is covered with vines growing wild in vast profusion. On its successive stages are raised all the varieties of fruit and grain, both of the temperate and tropical climates. The woods abound with game; and the mountains contain in their bosom mines of considerable value.

The human race flourishes in an equal degree: the men are distinguished for vigour; and the females, with the single exception of a darker complexion, are as famed for beauty as those of Circassia. All these bounties of nature, however, have been rendered unavailing by the oppressions of a feudal government, and by the continual wars which have desolated Georgia for more than a century. The nobles, who had reduced the prerogative of the king within very narrow limits, possess over their vassals the power of life and death, and extract from them the whole produce of their lands beyond what may afford the most scanty subsistence. The unfortunate husbandman is moreover exposed to the continual inroad of the Lesghians and other tribes from the upper heights of Caucasus, and is often obliged to plough with arms in his hands. Georgia, which had been protected by its situation from the tide of Turkish and Tartar invasion, was attacked two centuries ago by the whole strength of the Persian empire; and, after a very gallant struggle, was obliged to yield. The Sophis endeavoured to conciliate their new subjects, and Georgian youth were even employed as the royal guards of Persia. Yet the spirit of independence was not subdued; and when the power of their conquerors was shaken by the growing fortune of Russia, they eagerly sought to regain their freedom by an alliance with this new power. So far as related to the downfall of Persian influence, all their hopes were fulfilled; but the potentate through whom this triumph had been achieved, soon proved no less ambitious. The sons of the brave Heraclius were deprived of their inheritance, and Georgia was at last reduced to the regular form of a Russian province. This might have proved an ultimate good; and the Russians have in fact made some efforts to introduce tranquillity and industry; but the constant wars in which they have been engaged with Persia, and of which Georgia has been the theatre, have rendered these hitherto of very little avail. Through the pressure of these various evils, the population of this fine region is supposed to be reduced to a number not exceeding 320,000 souls. The greater number are not Mahometans, but Greek Christians, with a large proportion of Armenians, who have in their hands all the traffic of the country. The Russians draw from it a revenue of 800,000 rubles, not nearly sufficient to defray its expenses. The waters of Georgia are chiefly collected by the Kur or Cyrus, which flows first northward, along the foot of a chain of lofty mountains; but afterwards turns to the east and south, passes by Teflis, and falls into the Caspian on the borders of Ghilan. It has previously received the Araxes, from Ararat; the greater part of whose course, however, has been through Armenia and Aderbijan.

The only city of Georgia of any importance, or worthy of the name, is Teflis, (*fig.* 675.), the capital. It is boldly situated on the precipitous banks of the Kur, which flows here through a deep and gloomy defile covered with immense forests. Several points in its vicinity command a grand view of the bordering chain of mountains, rising in successive stages above each other, and terminating in the snow-covered pinnacles of Elburz. The city, founded in the eleventh century, does not possess any architectural beauty. It is a collection of low flat-roofed dwellings, built of dun brick, with small doors and paper windows. Nor are those splendid mosques, and gilded minarets, which elsewhere redeem the general poverty of Oriental cities, to be found at Teflis. There are, however, several handsome churches, though chiefly distinguished for their picturesque situation; and the old citadel, placed on a high promontory, presents a grand and imposing mass of ruins. The only really good buildings are a few which have been erected by the Russians; the arsenal, the hospital, and particularly the great market-place, the shops of which are screened from the weather by a long range of columnar arcades; and which, as the natives begin reluctantly to acknowledge, is much more commodious than the old one. Teflis is famous for its baths, formed of warm streams descending from the neighbouring hills, and collected into two large apartments, one for the male and the other for the female inhabitants. Their medicinal virtue is said to be considerable; but to an European eye, they are dark, dirty, and incommodious. The Russians make Teflis their head-quarters, and keep there a large military force, which is quartered upon the inhabitants. This is considered a serious grievance, being wholly inconsistent with the habits of Oriental seclusion,

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Castle of Teflis.

particularly in regard to the female sex, whose virtue, made hitherto to depend chiefly on the jealous guard kept over it, is said to have suffered materially from this intrusion. The population of Teflis, in consequence of the evils under which it has suffered, has declined in the course of the last twenty years from 22,000 to 15,000.

Proceeding westward from Georgia to the shores of the Black Sea, we find Mingrelia and Imiretta; regions celebrated in antiquity under the name of Colchis. The interior tracts are mountainous and rugged; but Caucasus here slopes downward, and allows to intervene between it and the sea a large plain, moist, fertile, but unwholesome. Floods innumerable, descending from the heights, and uniting into thirty considerable rivers, inundate this watery region. Among these, the only one of great importance is the ancient Phasis, now called the Rioni, which, after a long course through the deep Circassian glens, enters the plain of Mingrelia. The ground, impregnated with such copious moisture, becomes too soft for the plough, and unfit for the production of wheat or barley, but yields plentifully millet and other small grain, which forms the ordinary food of the inhabitants. Fruits of every kind grow spontaneously, though containing sometimes more juice than flavour; but this fault is not found in the figs, chestnuts, and grapes, which yield a strong agreeable wine. Raw silk abounds, and some rude manufactures are made of that material. There is a person holding the title of Prince of Mingrelia, and the country has vibrated between an attempt to maintain its independence, and a submission to Turkey or Russia; which last power has, by the course of events, become paramount. Mingrelia, however, has always been more exposed than even the rest of Caucasus, to oppression, tumult, and misrule of every description. The nobles are passionately devoted to hunting: they account a good horse, a good dog, and a good falcon, the first elements of human felicity. At the same time, they carry on the most regular system of oppression towards their dependants, and of indiscriminate plunder towards all others. Yet Mingrelia has not wholly lost that commerce which anciently rendered Colchis celebrated. Communicating by the Black Sea with Asia Minor and Constantinople, it supplies them with the commodities of the Caspian territory; silk, honey, and, unfortunately, above all, slaves; the obtaining of which, by purchase, seizure, and every sort of nefarious process, forms the principal occupation of the chiefs of Mingrelia. It is calculated that Turkey receives annually from thence about 12,000 of these unfortunate beings. As the port of Poti, however, at the mouth of the Rioni or Phasis, has by the last treaty been ceded to Russia, that power will henceforth command the trade of Mingrelia. Poti contains about 1000 inhabitants; from the obstructions at the mouth of the river, large vessels must anchor at the distance of half a mile. The late entrance of an English ship into this port forms a memorable event in the annals of commerce. Mingrelia extends about 140 miles along the sea-shore, and about forty or fifty inland. Reineggs estimates the population at 4,000,000; but, from every picture which has been drawn of it, we should imagine one-fourth of that number exaggerated.

Imiretta, composing the lofty interior of Mingrelia and the banks of the Upper Phasis, is a bold pastoral region, inhabited by a simple people, who have remained more exempt than the rest of Caucasus from the evils by which that region has been desolated. Their czar, an hereditary chief, continues to rule them, under a mere acknowledgement of vassalage to Russia. Retired in woody hills, or agreeable valleys, the inhabitants of Imiretta keep aloof from the scenes of contention by which they are surrounded. When, however, their native fastnesses are invaded, they defend them with all the hardihood of mountaineers. They have among themselves deep understood tones, which, echoed among the mountains, will often call up several hundreds from spots which did not seem tenanted by a human being. The people are accused of indolence; yet it is admitted, that silk, honey, and other Caucasian staples are reared by them with greater diligence than in other quarters. Kotais, called its capital, is an old city on the left bank of the Phasis, now reduced to about 2000 inhabitants.

Bordering on Imiretta, south of the Phasis, is Guriel, a country naturally as rich as Mingrelia, but still more desolated by Turkish inroads, and now reduced almost to a desert, being estimated to contain not more than 6000 families. By the last treaty, however, it has been ceded to Russia, whence a material improvement in condition is anticipated. Batoum, a port with the only good roadstead on this coast, is the seat of some trade.

Proceeding northward along the Black Sea, after an almost impassable range inhabited by a wild race called the Suanes, appears an extended and wooded region, the country of the Abasses, a rough variety of the Circassians. They resemble, without equalling, that people in their handsome persons and dignified manners. Secured from foreign invasion by the poverty of their country, and by its immense and entangled forests, they are wasted by intestine contests; and to the various forms of plunder, their situation has tempted them to annex that of piracy. It has also, however, enabled their country to become the theatre of some commerce in the usual Caspian commodities, that of slaves not excepted. Of this trade, Phanagoria, at the mouth of the Kuban, forms a sort of entrepôt. Anapa, farther to the south, a considerable port, with a good harbour, was in possession of the Turks till the last treaty, when it was transferred to Russia.

All the nations now enumerated occupy the declivities or borders of Caucasus where

alone any extent of culture, wealth, or civilisation can exist. Yet its extreme and most awful heights, the regions of rocks and eternal snows, are not wholly without their tenants. Among these, the most known and formidable are the Ossetes and the Leghis. The former occupy the mighty northern heights behind Circassia, and either hold or border upon all the routes leading thence to Georgia and the southern Caucasus. Of this position they avail themselves, either to plunder the passing traveller, or to levy a composition upon him. They block up the defiles, or roll down huge stones as he proceeds along the narrow paths cut in the perpendicular face of the cliffs. They have not a village that contains a hundred inhabitants, and their abodes are like little castles; yet, on an emergency, they can muster 10,000 horse. The Russians have beaten them, without being able to reduce them, but they have been forced to render up a number of their chiefs, who are kept as hostages at Mozdok, and by that pledge alone are prevented from indulging against Russia their favourite propensities.

The Leghis, who, from the southern summits of Caucasus, overlook the plains of Georgia, are a still more noted and terrible race. Viewing from this awful height the magnificent harvests which wave in the distance beneath, they are impelled to a perpetual career of robbery, and have become the terror and scourge of all the surrounding territories. Their habitations, perched on the summits of the loftiest cliffs, and on the edge of the steepest precipices, have a most fearful appearance. Respected as the bravest of all the tribes of Caucasus, and entrenched in its most rugged recesses, they have from time immemorial set all attempts to invade them at defiance. Like the Swiss, they have been tempted by poverty to engage in mercenary warfare, and hire themselves for a campaign of three months at the rate of twelve roubles. In their interior economy, they display no small degree of industry and energy. They have thrown strong bridges of stone or wood across unfathomable gulfs, have carried roads along precipices, and raised good water to their habitations by pipes or canals cut in the rock. They have availed themselves to the utmost of their scanty portion of ground, by forming it into terraces. They are chiefly Mahometans, with some remnants of Christianity; but a considerable number are still devoted to Pagan superstition, and worship the sun, moon, and stars.

Between the grand divisions now enumerated, there are various little tribes, and septs of greater ones, scattered through all the corners of this mountainous region. Enough, however, has been already said; for the few scanty annals of the Kistes, the Jugouches, the Tusches, and the Karabulaks, would, we conceive, afford little edification to the reader.

We have still to notice, at the head of the Caspian, Astrachan and its district, constituting a government of which the city of Astrachan forms the capital. This place, seated amid such a vast range of mountains and deserts, has little opportunity of becoming great or opulent. Yet its water communications are very extensive, by the Volga on one side and the Caspian on the other; though these are inferior to those of Europe, and of the rich countries of the East. A river, however, which traverses all European Russia must bring down some commodities; and Astrachan obtains raw silk from Persia; turquoises from Khorasan; rubies and other gems from the head of the Oxus. After all, its chief wealth is derived from its own industry, particularly the vast fishery which it carries on. The quantity of fish obtained, is not only sufficient for domestic consumption, but is largely exported; and the roes of sturgeon, prepared in that peculiar form called caviare, form an article of trade for which it is famed. A good deal of salt is obtained from marshy lakes in the neighbourhood; and some fabrics of leather and silk are carried on. The Russian monarchs, since the time of Peter, have made every effort to improve Astrachan and its trade. The Kremlin, however, and other monuments of its grandeur, when it was the capital of a separate kingdom, are now in ruins; and the city, though three miles in circumference, and surrounded by a wall, is for the most part poorly built of wood. Some handsome edifices of stone, however, have lately been erected, particularly two commercial halls. The population, amounting to 70,000, forms a various mixture of the people of Europe and Asia: Russians, Greeks, English, French, Persians; even the Hindoos have a small quarter appropriated to them. Most of the Persian trade is carried on by the Armenians.

The environs of Astrachan, unless in its immediate vicinity, consist of a boundless extent of flat steppe, in many places almost desert, but in others capable of supporting a considerable pastoral population. The occupants are decidedly Tartar. A large body of fugitive Calmucks have filled the eastern part with their flocks and herds. The western tribes are chiefly Nogais, mixed to some extent with the Cossacks of the Don. The Tartar habits and character universally prevail, though the people are reduced by subjection to a somewhat more orderly and industrious way of life than they would spontaneously adopt.

To the north of Astrachan is the large government of Orenburg, which forms, as it were, the link between European and Asiatic Russia. Tartars still form the basis of the population; but many of them have been trained to regular and industrious habits. The country is capable of every kind of culture, but is chiefly covered with rich pastures. Its eastern frontier is formed by the Ural mountains, possessing that rich mineral character which has been so often noticed. From these mountains flows to the Caspian a river called also the

Ural, and which in its southern course separates Russia from the vast wilds traversed by the Kirghises and Calmucks. A line of military posts here secures the empire from the inroad of these rude tribes. On this river is situated Orenburg, whose site has been several times changed, and which is now rather a well-built town of 2000 houses. To this market the Tartars bring annually 10,000 horses, and from 40,000 to 60,000 sheep, the latter purchased chiefly for the sake of the tallow. Hence also numerous annual caravans depart for Khiva, Bokhara, Kokan, and other cities in the interior depths of Asia. Though Orenburg, however, be the most important city of the district, yet, in consideration of its exposed situation as a frontier place, the seat of government has lately been transferred to Oufa, situated at the junction of the river of the same name with Belaia, which afterwards falls into the Kama. It is surrounded by a fertile territory, but lies itself in a species of hollow, intersected by numerous torrents and ravines. It is reported to have been once a great Tartar capital, and contains, in fact, many remains covered with Arabic and Cufic inscriptions.

CHAPTER XII.

SIBERIA.

Of the three great belts into which Asia is divided, and with which the geographic distribution of its animals has been observed to correspond, Siberia constitutes the third and most northerly. Its features are peculiar to itself, and, like those of the other portions of this continent, on a gigantic scale. As those of the south include the most extensive and populous empires in the world, and the middle tracts the widest range of pastoral table-land, so the northern regions of Asia present an almost unbounded expanse of frozen desert. Some of the plains, indeed, of its southern border are covered with deep and rich pasture, and, under a more careful tendence than they have yet received, might become the seat of populous kingdoms. But, as we proceed to its northern boundaries and the bleak shores of the ocean, human life, with the means of supporting it, becomes more and more deficient. Even here, however, that beneficent contrivance which presides over nature has provided for the support of a profusion of animals. That severity of the cold, which would otherwise be fatal, is guarded against in some by a thick coat of fat and unctuous substances; in others, by skins and furs, much richer, softer, and more beautiful, than those which clothe the tenants of the more favoured regions. The substances which communicate to these classes of animals the power of resisting the fiercest colds of the north, become, with little preparation, eminently useful and ornamental to man; the midnight gloom is enlivened, and the pomp of kings derives one of its most splendid decorations from commodities furnished by the shivering hunter of the polar desert.

Sect. I.—*General Outline and Aspect.*

The outlines of Siberia are formed by a continuous prolongation of some of the grandest features of nature. To the north, the ocean extends in a continuous line, not varying far from 70° of latitude, or somewhat beyond the Arctic Circle. On the east, also, Siberia is bounded by the ocean, not, however, the Arctic Ocean, but a corner of the great Pacific, enclosed between the opposite coasts of Asia and America, which approach each other till they form the narrow Strait of Behring. On this side the coast of Siberia is very much broken, and is bordered, not so much by the ocean itself, as by its deep gulfs of Okotsk and Anadir. For its western boundary, Siberia has the long chain of the Urals, which reaches from the ocean almost to the Caspian, and separates the vast plains of Russia in Europe from those, equally vast, of her Asiatic dominions. This "stony girdle of the world," as the ignorance of Europe once termed it, presents not the formidable barrier which that ignorance has sometimes supposed. The height does not exceed 3000 or 4000 feet; and the slope on each side is so gradual, as to be ascended with little difficulty in ordinary vehicles. At its southern point, it is nearly, if not entirely, connected with that vast chain which, running from west to east under the general name of Altaï, forms a parallel line with the mightier ranges of central Asia and India, and separates Tartary from Siberia. It appears in most of its course to be considerably higher and more rugged than the Urals; the branches which it throws into Siberia are peculiarly rich in metallic ores. The range strictly bearing this appellation occupies only about 7° of longitude around the sources of the Irtysch and the Yeniseï, and is more remarkable for its richness in metallic ore than for its elevation; but it is connected with other limitary chains extending in the same direction; the Sayanskoi, reaching to the Baïkal; the Yablonoy or Apple mountains, an extensive and rugged range, which, uniting with the transverse one of the Khingkhanoola, is prolonged, under the title of the Slanovoy or Aldan mountains, to the Eastern Ocean. The application to the whole of the term Altaï is somewhat arbitrary; but M. Humboldt conceives that it may be advantageously called "system of the Altaï." It forms a continued

line, bounding Siberia, and parallel to the Celestial mountains, the Kuenlun, and Himalayah, those mighty chains of central Asia and India. After extending along the shore of the Pacific, it throws across the peninsula of Kamtchatka a ridge which shoots up to a much greater elevation than any of the rest; since M. Ermann has just determined Klintcheva, its highest peak, to be more than 20,000 feet above the sea. He found the whole of the ridge to bear the most decided marks of volcanic action.

In delineating the land boundaries of Siberia, we have mentioned its mountains; for the whole interior of this region forms one vast dead and dreary level. The only great feature by which its wide expanse is diversified is its rivers; and these, in regard to length of course and volume of water, rival the greatest of the ancient world. They are not destined, however, like the streams of happier regions, to fertilise the plains through which they flow, and convey their rich produce to bordering kingdoms, and to climates beyond the ocean. No such purposes can be fulfilled by these

> "solid floods,
> That stretch, athwart the solitary vast,
> Their icy horrors to the frozen main."

If any of them had flowed westward into Russia, and reached any of the seas of the civilised world, it might have borne rich cargoes on its bosom, and given an impulse to the industry of this rude region. But they all flow parallel to each other, from south to north, beginning in the Altaï and its connected chains, rolling their sluggish waves through frozen plains, and ending in a sea "bound in chains of perpetual ice," along which the utmost efforts of modern navigation have in vain attempted to find a passage. It is only by a broken line, ascending the tributary of one river and descending that of another, that a laborious boat track, interrupted by frequent land portage, is formed across Siberia to the Eastern Ocean.

In tracing this chain of great rivers, beginning with the west, our notice is first drawn by the combined streams of the Irtysch and the Obi. The Irtysch or Irtish, which seems to have some claim to be considered as the main stream, rises, to the south of the Altaï, from an elevated portion of that chain. After a considerable westerly course, it combines with some other waters in forming the lake Saizan, whence it again issues, and, crossing the mountain limit, rolls northward through rich pastoral plains, till it reaches Tobolsk. Here it meets the Tobol, which, with its tributaries, has collected the waters of the western tracts of Siberia. About 200 miles lower it meets the broad stream of the Obi. This chief of the waters of Siberia rises in or immediately behind the Altaï, and runs through the provinces of Kolyvan and Tomsk, by whose capitals it passes, till, swelled by numerous tributaries, it joins the Irtysch. Though rising from a source less distant, it pursues a more winding course, and rolls a larger body of water, so that its name prevails after its junction. The united stream, however, rolls only through frozen plains, till, after a course of about 400 miles, it opens into a bay, or rather a broad estuary, called the Gulf of Obi.

The Yeniseï flows east of the Obi, in the same direction, and nearly of equal magnitude. This second of the rivers of Siberia arises near the Lake Baïkal, on the southern side of the Sayanskoi chain, whose waters it receives for a considerable space, till it finds or makes an entrance into Siberia. It then flows nearly due north to the Frozen Ocean. On its banks are the considerable, though secondary, cities of Krasnoyarsk and Yeniseisk. A very little above the latter it receives an important tributary, the Angara, or Upper Toungouska, whose waters rush impetuously through a rocky passage out of the Baïkal lake. They become

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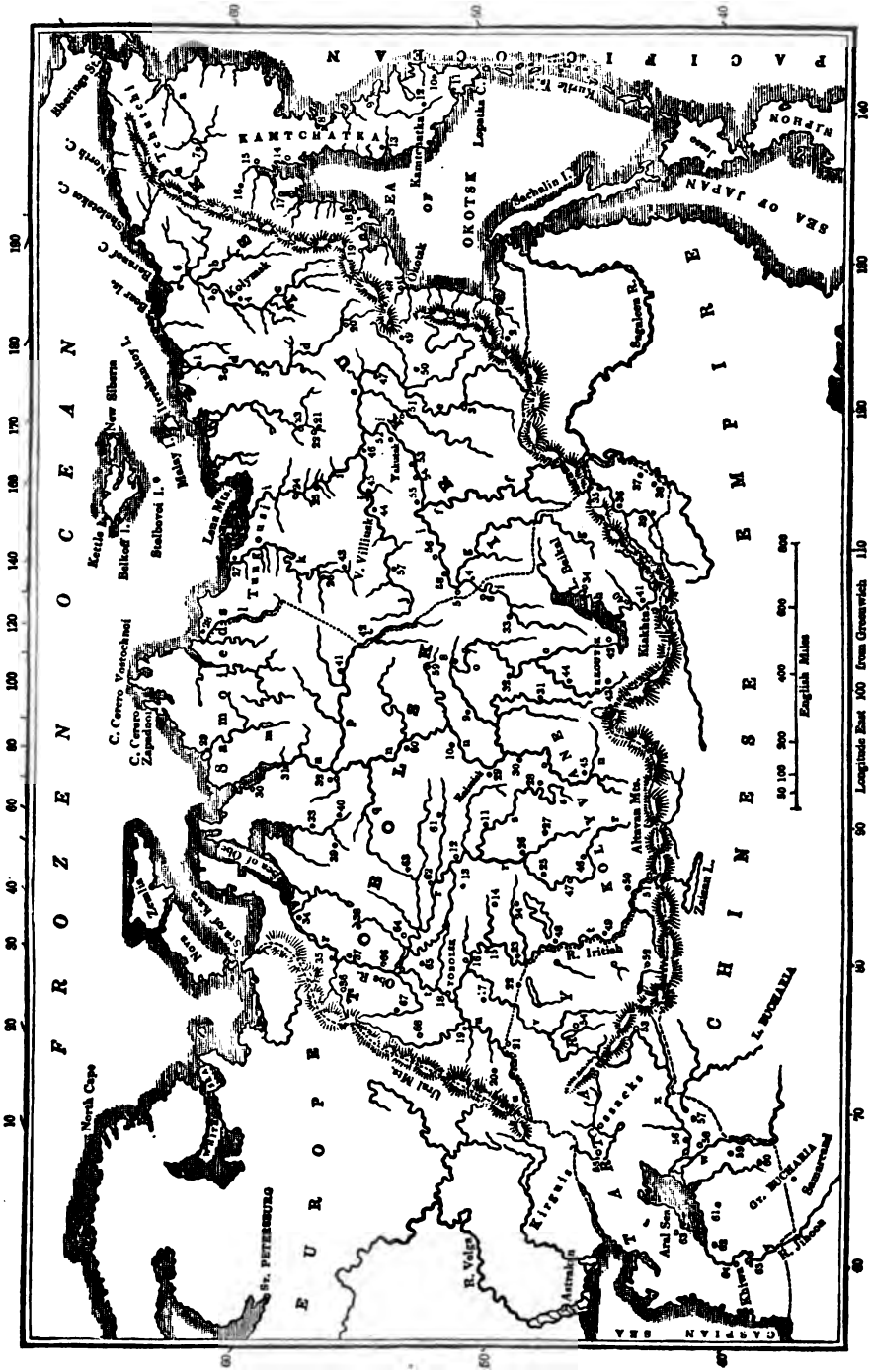
References to the Map of Siberia.

NORTH PART.
1. Simirno
2. Ogiginsk
3. Yedinsk
4. Kolymsk
5. Sredne Kolymsk
6. N. Kolymsk
7. Anadyrsk
8. Dranki
9. N. Kamtchatka
10. St. Peter and St. Paul
11. Bolcheretzk
12. Kamtchatka
13. Tigil
14. Poostaresk
15. Kamenoi
16. Aklansk
17. Igiginsk
18. Yamsk
19. Taunskoi
20. Omekon
21. Baralass
22. Verkoansk
23. Yansk
24. Giganak
25. Karbinskoi
26. Ceghaica
27. Olensk
28. Korgin Vill
29. Popova
30. Nagrebovko
31. Doudinsk
32. Turukshansk
33. Turovskaia
34. Barvagaska
35. Berezov
36. Vouinski
37. Merkalskoi
38. Satarinov
39. Tyniska
40. Karachouska
41. Ilimpeiskaia
42. Trenia
43. Taeai
44. V. Villinsk
45. S. Villinsk
46. Villinsk
47. Ladamarka
48. Okotsk
49. Tudomskou Krest
50. Pokoe
51. Anginska
52. Yakutsk
53. Nuiskoi
54. Markinskoi
55. Olekminsk
56. Mouria
57. Magazines of Salt
58. Jelovskoe
59. Tchapogirska
60. Tchoulkovo
61. Kitchangini
62. Murasovi
63. Sartam Ourei
64. Sourgout
65. Sit
66. Voronika
67. Soimskoi
68. Catharinenberg.

SOUTH PART.
1. Uda
2. Oudskoi Ostrog
3. Maiskai
4. Tchouiskoi
5. Wittim
6. Ivanouchkoia
7. Pacchino
8. Tchadobsko
9. Irkineva
10. Zotina
11. Taragaevi
12. Naryn
13. Tormskovi
14. Nazarovo
15. Tara
16. Ashevanskie
17. Ischim
18. Tobolsk
19. Tumen
20. Tcheliabinsk
21. Zverinogovskaia
22. Losseve
23. Omsk
24. Kainsk
25. Kholyvan
26. Tomsk
27. Kutznetsk
28. Atchinsk
29. Yeniseisk
30. Krasnoyarsk
31. Oudinsk
32. Yekharova
33. Marcova
34. Barginsk
35. Kourlarska
36. Nertchinsk
37. Kordoui
38. Chindat
39. Tchindanton-ronkoneyska
40. Selinginsk
41. Kiakhta
42. Irkoutsk
43. Oktinskoi
44. Condaleiska
45. Abakanskoi
46. Beisk
47. Barnaoul
48. Jelieziuskaya
49. Icebinjei
50. Ubinsk
51. Bouchtarminskoi
52. Copper Mines
53. Copper Mines
54. Tatagai Ruins
55. Mog Bish Moula
56. Kuduk
57. Turkestan
58. Ostrar
59. Uratuba
60. Orsujnah
61. Shaxlomir
62. Kharabad
63. Ruins of Blayavulis
64. Khiva
65. Macmet Serai.

Rivers and Lakes.
a Anadir, R.
b Omolin, R.
c Kolyma, R.
d Indigirka, R.
e Aldan, R.
f Olekma, R.
g Wittim, R.
h Baikal, Lake
i Lena, R.
j Vilui, R.
k Olensk, R.
l Olem, R.
m Pasida, Lake
n Yenisei, R.
o Angara, R.
p Toungouska, R
q Elagoui, R.
r Obi, R.
s Tchoudin, R.
t Irtysch, R.
u Tobol, R.
v Ischim, R.
w Serr, R.
x Saraou, R.
y Amoor, or Jihon, R


FROZEN OCEAN
EUROPE
CHINESE EMPIRE
KAMTCHATKA
SEA OF OKHOTSK
SEA OF JAPAN
PACIFIC OCEAN
Behring Str.
Behring C.
North C.
Shelagskoi C.
Serge Ice C.
Kotelnoi I.
New Siberia
Liakhov I.
Bolshoi I.
Maloi I.
Lena R.
Yenisei R.
Anadyr R.
Kolyma R.
Yana R.
Indigirka R.
Alazeia R.
Lena Mts.
Verkhoyansk Mts.
Stanovoi Mts.
Altaian Mts.
Yablonoi Mts.
Khingan Mts.
Amur R.
Sea of Okhotsk
Kamtchatka
Lopatka C.
Okhotsk
Gichiga
Shantar I.
Sakhalin I.
Hokkaido
Nipon
Kurile I.
Yakutsk
Vilyuisk
Irkutsk
Baikal L.
Selenga R.
Nerchinsk
Kirensk
Yeniseisk
Krasnoyarsk
Minusinsk
Barnaul
Tomsk
Tobolsk
Tiumen
Ekaterinburg
Perm
Kazan
Nijni Novgorod
Moscow
St. Petersburg
Archangel
Onega L.
Ladoga L.
Finland
Sweden
Norway
North Cape
Lapland
White Sea
Nova Zembla
Waigatz I.
Kara Sea
Obi R.
Irtish R.
Ural Mts.
Ural R.
Caspian Sea
Aral Sea
Sea of Azof
Volga R.
R. Volga
Astrakan
Kirghis
Mongolia
Gt. Khingan
R. Amur
Sea of Japan
Zaisan L.
Baikal
Kiakhta
Nertchinsk
Yakutsk
Verkhoyansk
Kolymsk
Anadyrsk
Gichiga
Okhotsk
Ayan
Aldan R.
Vilui R.
Olekma R.
Zeia R.
Selenga R.
Irtish R.
Tobol R.
Kama R.
Petchora R.
Dwina R.
Mezen R.
Onega R.
Volga R.
Don R.
Dnieper R.
Dniester R.
Pruth R.
Danube R.
Black Sea
Sea of Azof
Caspian Sea
Aral Sea
Lake Baikal
Lake Ladoga
Lake Onega
White Sea
Gulf of Obi
Gulf of Ob
Gulf of Penzhinsk
Gulf of Anadyr
Behring Str.
Behring C.
North C.
Shelagskoi C.
Serge Ice C.
Kotelnoi I.
New Siberia
Liakhov I.
Bolshoi I.
Maloi I.
Lena R.
Yenisei R.
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Ural Mts.
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Aldan R.
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Zeia R.
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Kama R.
Petchora R.
Dwina R.
Mezen R.
Onega R.
Volga R.
Don R.
Dnieper R.
Dniester R.
Pruth R.
Danube R.
Black Sea
Sea of Azof
Caspian Sea
Aral Sea
Lake Baikal
Lake Ladoga
Lake Onega
White Sea
Gulf of Obi
Gulf of Ob
Gulf of Penzhinsk
Gulf of Anadyr
English Miles
Longitude East 100 from Greenwich

afterwards peculiarly clear and transparent, and pass by Irkoutsk, the second capital of Siberia, till they bring to the Yeniseï a stream of equal magnitude to itself.* In its further course the Yeniseï receives two other Tounguskas, the lower of which has a course of 500 or 600 miles, and joins it at Turukshansk, on the borders of the Arctic Circle.

The Lena remains still to be mentioned amid the mighty waters of Northern Asia, traversing its most remote and northern regions. It rises from a small cluster of mountains on the northern shore of the Baïkal lake. Its early course, for nearly 1000 miles, is north-east, and sometimes almost due east; a direction highly advantageous for establishing a water communication with Okotsk. While following this direction, it receives two considerable rivers, the Wittim and the Olekma, both from the great boundary chain, called here the Yablonoy mountains. The Lena now passes Yakoutsk, the only place which, amidst the immensity of these eastern deserts, deserves the name of a town. A little farther down it receives the Aldan, which, with one of its tributaries, enables boats to reach within a short land carriage of the Eastern Sea. The Lena then flows almost due north, through desolate plains only frequented by the adventurous hunter, in search of the beautiful furs with which the animals that inhabit them are covered.

The secondary rivers of Siberia are chiefly the tributaries of the great ones, and, as such, have been already mentioned. The Olensk to the west of the Lena, and the Indigirka to the east, would, in Europe, be considered great; but their obscure and distant course, in the vicinity of features so much more grand, scarcely attracts attention. The Kovima and the Anadir, in the extreme east, have obtained more notice, in consequence of researches to ascertain on that side the boundaries of the continent.

Siberia contains one great lake, the Baïkal, whose dimensions almost entitle it to the appellation of an inland sea. The boundary chain, here throwing out branches peculiarly bold and lofty, forms a circuit of mountains, the waters of which not only suffice to feed this ample reservoir, but give rise to all the great rivers of north-eastern Asia. The Baïkal presents a grand and imposing aspect, being encircled by these mountains, which on the northern side are particularly rugged and rocky, and crowned with woods. The Russian navigators view it with peculiar reverence, calling it the Holy Sea, and reporting tales of those who have suffered severely in consequence of applying to it any less respectful appellation. This lake is about 300 miles in length by 50 in breadth. In winter it is completely frozen over, and down to the middle of March can be passed in wagons. Even in May, Mr. Bell found the navigation dangerous from the ice, and it was only by being moored to a solid mass of it that the vessel escaped injury. The lake abounds with fish, particularly sturgeon, and with seals, the presence of which seems very remarkable, considering the distance from the sea. The waters are said to be subject to certain interior agitations, which render the navigation sometimes dangerous, even when the wind is moderate. Its water is completely fresh. The other lakes of Siberia are excessively numerous, but scarcely deserve the name of lakes. They are rather chains of ponds, or stagnant collections of water, in the marshy or submerged steppes which cover a great extent of its western territories. Only the lake of Tchany in the steppe of Baraba, and of Kurg Algydum in that of Ischim, present considerable expanses. A great proportion of these little lakes are saline, or variously impregnated with mineral substances. M. Humboldt thinks it not improbable that they are remnants of some great interior sea connected with the Aral and the Caspian.

SECT. II.—*Natural Geography.*

SUBJECT. 1.—*Geology.*

The Uralian and Altaïan ranges afford splendid displays of all the rocks of the primitive, transition, and alluvial classes; vast tracts, also, are composed of secondary and tertiary formations; and volcanic rocks of ancient and modern date rise through the older and newer deposits.

Mines.—Siberia has been celebrated from an early period on account of its rich mines and precious stones.

1. *Gold Mines.* The principal gold mines in Siberia are those of Berezof, in the district of Catherinenberg, on the east side of the Uralian mountains. The gold occurs either pure or disseminated through iron pyrites, forming what is called the pyritous ore of gold. Five English pounds weight of gold are obtained from 1250 stone weight of the crude ore.

2. *Silver mines.* The most considerable silver mines are those of Kolyvan, Nertchinsk, and Schlangenberg. The silver occurs in a native state, more frequently in the state of ore, as silver glance, red silver ore, horn ore, or muriate of silver. Platina has been found in such quantity, to the east of the Urals, that it is now coined, the coins containing a certain proportion of silver.

* [It would be more correct to consider the Selinga which flows into the Baïkal, and the Angara which issues from that lake, as the main stream, and the Yeniseï would then have the longest course of any river upon the Eastern Continent.—AM. ED.]

3. *Copper mines.* Rich copper mines occur in the Uralian and also in the Altaïan chain. The prevailing ores in these mines are red copper ore, or red oxide of copper, and green and blue malachite.

4. *Iron mines.* Iron abounds in Siberia, but hitherto few considerable mines have been established in this division of the Russian empire.

5. *Lead mines.* Although galena abounds in Siberia, hitherto but few mines of lead have been opened.

Gems and Ornamental Stones.—Diamond, the most precious of all the gems, has been lately found in Siberia, but not in considerable quantity. The most frequent of the gems are topaz and beryl: the true emerald has not been met with. The Siberian avanturine is a variety of quartz rock, with disseminated scales of mica, which, when polished, has a beautiful appearance. The red tourmaline, or rubellite, a very beautiful mineral, found at Sarapulka, not far from Mursinsk, when cut and polished, is highly esteemed as an ornamental stone or sub-gem. Beautiful blue and green felspars, valued by collectors, are met with in different places; and the valuable and beautiful mineral, the lazulite, or lapis lazuli, which affords the well-known pigment named ultramarine, is met with around the Lake Baïkal. The elegant agates, cornelians, and calcedonies of Siberia are well known; and the rock crystals, with embedded green tourmaline and rubellite, are prized by collectors.

Subsect. 2.—*Botany.*

The botany of the Altaïc mountains has very lately been ably illustrated in the Travels of Professor Ledebour, of Dorpat, which we regret are not yet translated from German into the language of our country; but from which we learn that the southern and western parts of the Altaïc mountains, which it was the principal object of the author's journey to explore, consist of wide steppes, whose soil is partly sand and partly clay, containing more or less saline principle. There nature, with few exceptions, only offers the general forms of the north of Europe, and those objects which are new and peculiar are neither remarkable for beauty nor singularity of structure. The Altaïc range, on account of their north and easterly position, contrast but unfavourably with the mountains of more southern and tropical latitudes. The traveller does not, as in tropical climes, descend from lofty mountains into "smiling fertile vales," where a bright sky makes him forget all his fatigues; on the contrary, he must submit to be drenched with continually recurring rains, to experience frost even in the summer nights, and to wade through long and weary bogs. Deep and rapid are the rivers of this country, especially the Irtysch and the Alei: the Uba and the Ulba, the latter a tributary stream to the Irtysch, also take their rise in the mountains, and water, for a greater or less distance, the steppes of this district. There are many lakes, some strongly impregnated with salt, and few entirely free from it. Through the whole of the country which lies south of the Irtysch, the ground rises, partly into separate hills, and partly into ranges of small eminences, stretching one above another, like terraces, to a height of 1156 Parisian feet. Large pine forests skirt the Irtysch from Barnaoul to Schulbinsk; the banks of the Alei are also covered with trees, exclusive of the Fir tribes, and the same is probably the case with the other small rivers. The Uba and Ulba are, however, mostly destitute of wood; and, in general, this wide steppe tract, except the above-mentioned pine forests, is barren of trees; though farther north, there is no deficiency of them. In the steppes occur many plants that grow plentifully in Europe, particularly the following:—Adonis vernalis and Anemone patens, both in great abundance; many species of Artemisia, Allium, Gypsophila and Statice; numerous Umbellatæ; Ceratocarpus arenarius and Diotis ceratoides cover whole tracts; and, where the ground is impregnated with saline principle, the peculiar salt plants occur in abundance, such as the species of Polycneum, Atriplex, Chenopodium, Frankenia, Tamarix, Salicornia, and Halocnemum; also Chorispora sibirica, Diotis atriplicoides, and others. Farther south, Amaryllis tatarica is extremely plentiful, with Rindera tetraspis, and the equally rare Nepeta sibirica; and the beautiful Eremurus growing on the little hills. But the peculiar richness of the Flora of this steppe first displays itself near the Irtysch, where, besides most of the above-named plants, the following deserve to be particularly noted: a new species of Peplis and of Camphorosma; many individuals, quite peculiar to this country, belonging to the genera Cachrys, Peucedanum, and Seseli; among the Asperifoliæ, the genera Echinospermum and Lithospermum, Cynoglossum, virdiflorum, Solenanthus circinatus (n. sp.), Tournefortia Arguzia, Hyoscyamus pusillus, Rheum leucorhizum; Arenaria subulata, filifolia, and longifolia, Cotyledon Lievenii (n. sp.), Saponaria elegans (n. sp.), many Zygophylla, Ammodendron, Sieversii, Caligonum, Pallasii, the Saxaul (*Annobasis Ammodendron*, n. sp.), Rosa berberifolia (*fig.* 677.), Ranunculus platyspermus, Dodartia orientalis, Dracocephalum integrifolium (n. sp.), two new kinds of Eremostachys (a genus that ranks between *Phlomis* and *Molucella*), Phlomis agraria, several Alyssa, Chorispora stricta, Goldbachia, many Lepidia, Megacarpæ lacineata, Sterigma tomentosum, Tauscheria, a host of Astragali, several of them frutescent; Hedysarum splendens, Robinia Halodendron, Cirsium igniarium, and a variety of Saussureæ, Scorzo-

neræ, and Serratulæ, with Tragopogon ruber, and numerous others. Many of these plants occur also even in the territory of Loktewsk. When rising to the mountains from these steppes, the vegetation, at a height of 4500 Parisian feet, assumes a still greater similarity to that of Europe; though many of the peculiar productions of the country still appear. The latter principally belong to the vernal plants; they also grow on the steep sides of the rocks, or adorn the banks of the mountain streams, wherever these are liable to occasional inundations. In such spots, Gentiana acaulis and Cortusa Mathioli flourish, and Cardamine macrophylla, Saxifraga Geum, Pedicularis resupinata, and others, grow in the greatest luxuriance. Also, rich flat meadows, situated at the foot of the higher mountains, produce many of the peculiar plants of Siberia; while, on the contrary, gently rising hills, or spots clothed with scattered wood, exhibit such vegetation only as is common to Europe. This is likewise observable in such places as form standing bogs, and are neither irrigated by the fresh water trickling down the mountains, nor shaded by a thick covering of foliage. Still the morasses of this region do possess some plants peculiar to themselves.

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Rosa Berberifolia.

The Spring flora is especially marked by the abundance of Ranunculaceæ and Liliaceæ; as Ranunculus polyrhizos; Adonis vernalis, sibirica, and villosa; Pæonia hybrida, Anemone patens, cærulea, altaica, and umbrosa (n. sp.), Atragene alpina, Ornithogalum angulosum (n. sp.) and uniflorum, Tulipa altaica and tricolor; Iris ruthenica, glaucescens (n. sp.), and flavissima. Among the rock plants of this region may particularly be noted the following, as most numerous:—Veronica pinnata, Ziziphora media; Dracocephalum origanoides, peregrinum, pinnatum, Ruyschianum, and nutans; Nepeta lavandulacea, Thymus angustifolius, Patrinia sibirica, Androsace dasphylla (n. sp.), Myosotis rupestris, Onosma simplicissima and Gmelini, Sibbaldia erecta and altaica, Statice speciosa, Swertia dichotoma, Thesium rupestre (n. sp.), Bupleurum baldense, several Allia, Stellera altaica, Gypsophila thesiifolia, Orostachys chlorantha, Sedum Eversii and hybridum; Silene altaica, graminifolia, stylosa (n. sp.); Potentilla pennsylvanica and sericea, and many other individuals of this genus; Thalictrum petaloideum, Linaria altaica, several Alyssa, Erysimum lanceolatum, Hesperis aprica, various Astragali, Oxytropis setosa, Aster alpinus, Centaurea sibirica, Prenanthes diversifolia (n. sp.), and Ephedra monostachya. On the same plain grow, to the height of a man, some Heraclea, Seseli athamantoides, Cirsium heterophyllum, Silybum cernuum, Achillea impatiens, several Adenophora, Delphinia, and Aconita, many Veratra and Thalictra, with Senecillis glauca, Tragopogon orientalis, Pedicularis elata, and the beautiful P. proboscidea, that covers large tracts.

Among the peculiar bog plants of this region may be mentioned Androsace filiformis, Viola (tricolori aff.), Ranunculus Cymbalaria, longicaulis (n. sp.), natans (n. sp.), Gentiana barbata, Cirsium Gmelini, Potentilla multifida, Allium uliginosum (n. sp.); and, where the ground is shaded by shrubs or low copsewood, we find Primula sibirica, Phaca exaltata, Pedicularis speciosa, and others; where the valleys expand, in consequence of the rivers that water them being swollen, as in the valley of Tscharysch and that of the Koksun; there, between the river and the mountain that bounds the vale, are extended, flat, steppe-like plains, similar to those found at the foot of the mountains, but with less luxuriance of vegetation, and different from them in their peculiar productions. In such spots grow Convolvulus Ammanni, Gentiana Gebleri, Potentilla (n. sp.) subacauli aff., Saussurea (n. sp.); Peucedanum vaginatum (n. sp.), which, in dry places, is only a few inches high; Aster altaicus, Veronica incana, Alyssum tenuifolium, several Artemisiæ, with Ranunculus amœnus (n. sp.), Sisymbrium micranthum (n. sp.), Ballota lanata, several kinds of Leontodon, and, according as the soil is more or less salt, Glaux maritima, which frequently densely covers the ground, and the other formerly enumerated saline plants. From 4500 to an elevation of 6500 Parisian feet, where Pinus Cembra marks the highest present boundary of the growth of trees, the European species gradually diminish, to give place to the flora of the Altaï. Here grow most of the individuals of the genus Pedicularis, Sanguisorba alpina (n. sp.), Primula nivalis, Veronica densiflora (n. sp.); Gentiana altaica, angulosa, glacialis, humilis, and septemfida; Swertia obtusa (n. sp.), Athamanta compacta (n. sp.), Linum sibiricum, Lonicera hispida, Primula Pallasii, Viola altaica, uniflora and pinnata, Juncus triglumis, Epilobium alpinum, Cerastium alpinum, Saxifraga Hirculus, Mespilus uniflora (n. sp.), Potentilla macrantha (n. sp.), Aquilegia glandulosa, Ranunculus altaicus, Anemone narcissiflora, Dracocephalum altaiense, Linnæa borealis, Phlomis alpina, Cochlearia integrifolia, Macropodium nivale, Oxytropis altaica, sulphurea (n. sp.), Doronicum altaicum, Erigeron alpinus, Frolovia lyrata (n. sp.), Leuzea altaica, Saussurea pycnocephala (n. sp.), a number of Willows, &c. The most central and westward of these extended steppes, which rise one above another like terraces, to an elevation of 5759 Parisian feet, is still more distinguished by its vegetation than the lower ones, situated on the banks of the Tscharysch and Koksun, being extremely arid, though sparingly producing, here and there, individual groups of plants,

and exhibiting such only as are entirely peculiar to itself. Two species of Anabasis, a new and shrub-like Atriplex, likewise an undescribed frutescent Chenopodium, and three new Zygophylla, two novel shrub-like and very strong-scented Artemisiæ; Corydalis stricta in large bushes; some species of Oxytropis, with persistent prickly peduncles, some with verticillate leaflets, forming low shrubs: these, together with a few other plants, form the whole of the certainly poor, but highly interesting, flora of this steppe. Yet, at some hundred feet above the present boundary of the growth of trees are seen their dead stems, and on the ground many prostrate shrubs, such as Juniperus nana (?), Betula nana, several Willows, Mespilus uniflora, and Dryas octopetala. Many of the herbaceous plants of the preceding region occur also in this; but among those entirely confined to it are the following:—Eriophorum Chamissonis (n. sp.), Athamanta crinita (n. sp.), Claytonia acutifolia, Gentiana algida, nutans, and rotata, Sibbaldia procumbens, Luzula spicata, Ozyria reniformis, Arenaria (Helmio aff.), nardifolia, and another new species, Biebersteinia odora, Cerastium pauciflorum (?) Lychnis uniflora and tristis (n. sp.), Saxifraga cernua, glandulosa (n. sp.), terektensis (n. sp.), and hieraciifolia, Sedum elongatum (n. sp.), and quadrifidum, Thermopsis alpina, Potentilla grandiflora and nivea, Papaver nudicaule, Ranunculus isopyroides, Thalictrum alpinum, Gymanandra bicolor (n. sp.), several species of Pedicularis; Draba carnosula (n. sp.), hydrophila (n. sp.), and lactea; Parrya exscapa (n. sp.), Corydalis pauciflora, Phaca frigida, Trifolium grandiflorum (n. sp.), Artemisia alpina, Cineraria (aurantiacæ aff.), and lyrata (n. sp.), Hieracium crocatum (n. sp.), some kinds of Leontodon, Pyrethrum pulchrum (n. sp.), Saussurea pygmæa, Orchis viridis, and various Grasses and Sedges. Some plants also grow in this district that are found at every elevation throughout the country. Caltha palustris generally adorns the margin of little alpine rivulets; Epilobium angustifolium also is found in spots above the boundary of trees, quite unaltered in its appearance; Erythronium Dens Canis springs up wherever the snow is just melted.

The highest limit of trees, estimated by Ledebour at 6500 Parisian feet, is, however, as he says, not always the same. It depends partly on the species of tree, partly on the declivity of the mountain. On the south side, at the rise of the Tscharysch, the last stem of Pinus Cembra appeared, at an elevation of 6541 feet above the sea. On the north side of the plateau of the Korgon, the highest limit of the same tree was 5254 feet; on the Koksunchen Snow Mountains (their east and west sides), at 5692 feet, on the snowy peaks of Ulbinski to the Kreuzberge, at Riddersk, where the Larch forms the boundary, these trees now cease at 5500 Parisian feet, while their dry stems may be seen at a height of 6187 feet. As to the grouping of the different kinds of trees, the following were remarked: Birch, Firs, and Pines are in the lowest situations; the Birch (Betula alba) rises no higher than 4536 feet on the Ridderschen Kreuzberge; on the east side of the Koksun Snow Mountains, it ascends to an elevation of 5236 feet. Pines, which are seen on the sandy soil of the steppes, and are also common on the granite rocks among the mountains, seldom appear higher than 3000 Parisian feet above the sea. Firs, on the contrary, ascend to an elevation of 5270 Parisian feet, though from 4000 feet they are less frequent than on the steppe, where they form large forests. Pinus sibirica grows at the foot of the mountains with the Fir, but more frequently together with the Spruce (P. Abies); and at a height of 2000 to 2300 feet it is very abundant. From 4000 feet upwards, this species occurs more frequently as P. Abies disappears, and at 4000 to 5000 feet it forms large and close forests, but was never observed beyond 5270 feet, its limit being the same as that of the Fir. The Larch trees were not seen below 2550 feet; their highest boundary being on the Ritter Kreuzberge, 5500 feet: at 4000 feet they form extensive woods, everywhere covering the north side of the mountains, as on the Cholsun, Listwaga, and several others. Pinus Cembra first occurs at 4000 feet, but is never so numerous as to cover a tract of country, to the comparative exclusion of other trees. Ledebour heard of a forest of Cedars at Tschetschulicha, but never saw it, which was stated to attain a greater elevation than any other tree on the Altaï, even 6540 Parisian feet. When the woods are very thick, particularly of Pinus sibirica (but such were not observed north of Riddersk), they will scarcely allow a plant to grow; where they are not so close, and the ground is moist, they then shelter an uncommonly luxuriant vegetation: Aconita, Cimicifuga fœtida, Senecio sarracenicus, Cacalia hastata, Polemonium cœruleum, Orobus luteus, Pæonia hybrida, Arabis pendula, and several others, frequently attain a considerable height, eight to ten feet, and even more; but where the woods are very thin, and the ground is dry, there the covering of plants is extremely scanty. It is difficult to fix the line of snow exactly. On the north side of the mountain at Riddersk, the snow lies sometimes in the hollows at the height of 5500 feet during the whole summer, the quantity varying in different years. On the plateau of the Korgon, on the side inclining to the northward, Ledebour observed, at 6700 feet, large masses of snow, in which might be clearly distinguished the layers of several years; a circumstance rarely, if ever, seen on the south side of any mountain. For whether the summit of the Alp of Baschalathi is always covered with snow during summer, seems uncertain, though the natives declare such to be the fact. To what altitude the culture of corn may be successfully prosecuted, has not been ascertained by actual trial; yet it deserves notice, that corn grows, at about 4000 feet above the level

of the sea, in villages to the south of Cholsun, which is also the limit of resident inhabitants. Some Calmucks, who rove in the lofty Tschuja steppe, may, perhaps, pass the winter at a greater height; still their yourten cannot be termed settled dwellings, nor is it possible that they do spend that season there. When the geographical position of these countries is carefully considered, lying from 47° to 54° north latitude, and at their northern boundary from 99° to 105° (but on the south from 91° to 102°) E. longitude from Ferro, no other prevailing forms of vegetation can really be expected, than such as bear a general similarity to those of the northern and midland parts of Europe; for it is well known, whatever be the longitude, that corresponding degrees of latitude produce the same kind of vegetation, becoming more and more alike as they proceed from the equator towards the poles. But we may reasonably conclude that many species, different from the European, occur, in a country which is divided from Europe by a large chain of mountains, the Ural, running north and south, by immensely extended steppes, lying at the south and eastern foot of them, and which are even traversed by mountains whose elevated summits rise above the level of the snowy region.

A striking feature of Altaïc vegetation consists in the scarcity of hard-wood trees. The Terebinthaceæ, Aceræ, and Tiliaceæ are absent, as also the genera Quercus, Fagus, Carpinus, Fraxinus, &c. The Birch is almost the only hard wood found in tolerable plenty; next to it are the Aspens, which present themselves here and there, collected into little groves. Besides these, two species of Poplar occur on the banks of rivers and in the low tracts. The other hard-wood trees do not attain a large size, and are scarcely numerous enough to deserve notice. With regard to the herbaceous plants, there is a considerable disproportion between the amount of annual and perennial ones. The former are very few, even in the less elevated districts; and as they diminish on the mountains of other countries, so they here disappear almost entirely. In a country where the vegetation is often, during the flowering season, covered with snow, the annual plants cannot be expected to survive long, as their seeds are seldom perfected; while the perennial plants suffer less, their roots being unhurt, and capable of throwing up new shoots.

There still belongs another peculiarity to the Altaïc flora, which is, that in many of the families that are numerous there as to species, the genera are very few; while all the others seem to be replaced by an individual or a couple of genera: thus it is among the Personatæ, where the genus Pedicularis composes almost one-third; and among the Asperifoliæ, where Myosotis and Echinospermum number more than one-half. In the Cynarocephalæ, too, upwards of half the species belong to Saussurea and Serratula; among the Eupatorineæ, the Artemisiæ are two-thirds; and in the Rutaceæ, three-fourths are claimed by the genus Zygophyllum. But the Leguminosæ present the most striking instance of this; for three-fourths of the species in this very numerous family consist of the genera Astragalus, Oxytropis, and Phaca, while the many genera which are found in other places, contributing numerous individuals to swell that tribe, are, in the Altaï, almost wholly wanting: for instance, there are but two species of Medicago, and five of Trifolium. Twenty-three Ferns, according to the Linnæan system, of which one-third belongs to Equisetum, were collected by Ledebour. There is little difference between the Cryptogamia of the Altaï and that of Europe.

Of the other parts of Siberia, the vegetation is so similar to that of the northern districts of Europe, that we shall omit all notice of it, and direct the attention of our readers to a country which has been more satisfactorily explored by the botanists of the recent Russian expedition*; namely, KAMTCHATKA, the ALEUTIAN ISLANDS, and BEHRING'S STRAITS.

The cove of Awatscha, lying between the same degrees of latitude as Berlin and Hamburg, and the haven of St. Peter and St. Paul in the interior, seem to be but little exposed to the influence of sea winds. The arborescent Birch grows here; but stunted, and very different from the slender, graceful tree that is so much admired in the north of Europe, and particularly at Petersburg. Pinus Cembra, which, on the European Alps, attains to a greater height than P. Abies, and forms the boundary of the trees, Sorbus Aucuparia, Alnus incana, and some Willows, are seen; but they remain quite shrubby. Timber may, however, be raised in the interior of the peninsula, where the climate is milder than on the east coast; and the seeds of the Pinus Cembra, which are eaten at the tables of the Russians, come from Siberia, via Okotsk. Grasses and herbaceous plants thrive luxuriantly, the soil being rich and the sky mild. There are but few species of vegetables, and these seem about equally distributed. In shady spots grow Spiræa kamtchatica, Allium ursinum, Maianthemum canadense, Uvularia amplexifolia, Trillium obovatum, &c. In the pastures are a Veratrum, Lilium kamtchaticum, Iris sibirica, &c. On the hills, which are rocky, abound some species of Caprifolium, Spiræa, Rosa, the Atragene alpina, and other mountain plants, as Rhododendron kamtchaticum, Empetrum nigrum, Trientalis europæa, Linnæa borealis, Cornus suecica, Saxifragæ, &c. Some kinds of Ferns, from the number of the individual plants, form a

* Particularly by Chamisso, from whose botanical writings many extracts are given in the first volume of Hooker's Botanical Miscellany.

considerable part of the vegetation. Urtica dioica, which was probably introduced, seems to have established itself as a prevailing inhabitant of the soil.

The peninsula of Alashka, and the adjoining island called Oonimak, which is only separated from the continent by a narrow strait, seem to have the same character of vegetation as the main land, for trees are produced there; while Oonalashka and the other islands of the range are quite bare of them. A few miserable Firs, originally brought from Sitka, and planted at Oonalashka, may still be seen, most of them decayed, and the others scarcely living; but the plantation is young, and trees of this kind endure removal but ill.

The island of Oonalashka, having been most explored, may serve as a point of comparison to illustrate the vegetation of adjacent and more northern countries.

At Oonalashka, Willows scarcely grow higher than the grass and herbage of the moist grounds. On the inferior hills, a completely alpine vegetation appears; even on the least elevated parts of the mountains are some Vaccinia, resembling V. Myrtillus, that scarcely rise above the ground. Besides the brilliant verdure, due to a moist atmosphere, which decks the grass in Kamtchatka, and enlivens even the summits of the rocks, the lustre of the fresh unsullied snow, and of some tufts of plants, bestow on those dreary regions a variety and beauty of hues which are quite delightful. Lupinus nootkensis, Mimulus luteus and guttatus, Epilobium angustifolium and E. latifolium (*fig.* 678.), Rhododendron kamtchaticum (*fig.* 679.), &c. are among the most conspicuous.

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Epilobium Latifolium.

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Rhododendron Kamtchaticum.

The vegetation of Oonalashka appears to have nothing further in common with that of St. Peter and St. Paul, than as respects its alpine flora and the coast plants of these northern shores. Besides such species as are likewise found farther north, there is only the Lilium kamtchaticum (except, indeed, the variety which grows at Oonalashka should prove a distinct species), and the Uvularia amplexifolia, common to both places; while, on the contrary, more Kamtchatkan species of plants prevail on the American coast, north of Behring's Straits, that are absent at Oonalashka. It is the flora of north-west America which descends to the base of the hills of Oonalashka, where it unites with the Arctic flora. Thus, Rubus spectabilis, Lupinus nootkensis, Epilobium luteum, and Mimulus guttatus, Claytonia unalashkensis and sibirica may be reckoned also here. Sanguisorba canadensis, Lithospermum angustifolium, &c. belong to the common flora of America.

Many kinds of Grasses grow in the low lands, with some Umbelliferæ, as Angelica, Heracleum, &c. A dozen Carices, scarcely forming a larger proportion of the vegetation than in the north of Germany, some Scirpi and Eriophora, accompany them, and a few Junci, in the proportion of about one to two. The Orchideæ constitute a group of some importance, both because of the number and beauty of the individual species: they prevail alike in the valleys and on the hills, to the number of 11 kinds; among them is a beautiful Cypripedium. Higher north, not one of this family can be seen. Of the Ferns there are about 8; nearer to the Pole a single specimen of Filix only appears. At Oonalashka there are some Lycopodia; in the more arctic regions but one. Water plants grow in the lakes, as Potamogeton, Sparganium, Ranunculus aquatilis, &c.; in the higher latitudes only two species of Hippuris, and the common Callitriche can be found. Two other Ranunculi, Prunella vulgaris, a species of Rhinanthus, of Cineraria, Achillæa, Plantago, and Geum; some Rubiaceæ, a Claytonia, Menyanthes trifoliata, a Triglochin, &c., form part, also, of the productions of the valleys in Oonalashka, with a Bartsia, perhaps distinct from B. pallida. To a beautiful plant which constitutes a new and distinct genus, the appellation of Romanzoffia unalashkensis has been given, in commemoration of the noble patron of science in Russia. The genera Rumex, Polygonum, Aconitum, Thalictrum, some Alsineæ, the Iris sibirica, Geranium pratense, Comarum palustre, and Montia fontana, are distributed all over these arctic regions. Empetrum nigrum, and Helleborus trifolius *Linn.*, the latter being an American plant, not found more to the north, grow on most of the hills, indicating the alpine nature of the scenery. Also some Vaccinia, with the common Oxycoccos, Arbutus alpina, and Uva-ursi, with a white-flowered Menziesia (*M. cærulea var.* ?), Rhododendron kamtchaticum, Azalea procumbens, Andromeda lycopodioides (which, nearer to the Pole, gives place to A. tetragona), the alpine Willows, Silene acaulis, Sibbaldia procumbens, Cornus suecica, Trientalis europæa, Linnæa borealis, Ornithogalum striatum (2 vars.?), Anthericum calyculatum *Linn.* var. borealis, Königia islandica, a Gymnandra, apparently different from that found farther north, 10 Saxifrages, 3 Pediculares, some Potentillæ, 2 Gea, 2 Anemones, 3 Primulæ, a Papaver, a Drosera, a Pinguicula, 2 Pyrolæ, a Viola, a Parnassia, a Rubus, and an Arenaria. There have been but one alpine Ranunculus and 3 Gentianæ seen; more individuals of these

genera prevailing farther north. Of the class Syngenesia, Aster, Hieracium, Gnaphalium, Leontodon, and Artemisia grow at Oonalashka; this class abounding greatly towards the Pole, the genus Artemisia, in particular, exhibiting many individuals. On the other hand, Oonalashka produces some alpine species of Campanula and Veronica, which are entirely wanting in higher latitudes. Some individuals of the order Cruciferæ are scattered, partly on the hills, and partly in the valleys. Neither Alnus incana, Betula nana, Ledum palustre, Dryas octopetala, Diapensia lapponica, Rhodiola rosea, nor the genera Spiræa, Astragalus, Allium, Myosotis, Corydalis, Valeriana, Aretia, Androsace, Dodecatheon, Delphinium, or Orobanche, all of which are natives of more arctic regions, grow at Oonalashka.

The maritime flora, which is unaltered in the arctic regions, consists particularly of Elymus mollis (Trinius), Arenaria peploides, Pisum maritimum, with various appearances of Pulmonaria maritima Willd. (being, perhaps, a different species, the P. parviflora Pursh), Cochlearia officinalis, and Arnica maritima, which, though luxuriant and branched in Oonalashka, is, farther north, only one-flowered. To this list may be added Potentilla anserina. The sea, along the coast and in the creeks, is rich in Algæ; while the Fucus esculentus (the Sea Kale of the Russian inhabitants) is particularly observable among many gigantic species of this genus.

At Oonalashka, the Mosses and Lichens begin to assume that predominant station which they hold in all the very cold districts.

A cursory view only has ever been taken of the islands St. George and St. Paul, situated in nearly the same latitude as Riga. It is extraordinary how much more arctic is the appearance of nature there than at Oonalashka. No sheltered valleys, no protected spots, favour the vegetation of the plants of milder climes; a perfectly alpine growth prevails, both on the hills and the beach. The high summits of the desolate rocks are covered with pale and black Lichens, while those spots which are irrigated with melted snow afford only Sphagnum, a few other Mosses, and some Carices. There are no springs in the soil. The various arctic plants choose, according to their nature, the rocky or the moory spots; none rising above the ground, to which they seem as if closely appressed. A Lupine in the island of St. George, and an Achillea at St. Paul, remind the observer of the productions of Oonalashka; but there also are several species that are not seen even in the highest parts of the latter island, such as Ranunculus Pallasii and Gmelini, an Androsace, and a Claytonia. One plant only seems peculiar to these islands, a Cochlearia (?), which is plentiful and characteristic.

The alpine or arctic flora, which at St. Lawrence adorns the foot of the mountains, does not seem to enliven their summits; for, when these are entirely free from snow, and the water produced by the melted snow irrigates some brilliant plants, the dry ridges and declivities of the masses of fallen rocks are only scantily attired with gray and black Lichens.

The mountains of these dreary climes, being unprotected by any covering of vegetation, soon decompose. The frost bursts the rocks, every summer's gentle warmth causing fresh ruins, and so the destruction hastens towards its completion. Wherever the abundance of Sphagnum has not produced a boggy turf in the deeply watered places, the ground presents only heaps of broken rocks.

The aspect of nature at the cove of St. Lawrence is most wintry; the scanty herbage barely covering the black soil, while the dwarfish Willows do not reach to one's knee. The Andromeda polifolia (*fig.* 680.), that is found there, does not exceed two or three inches in

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Andromeda Polifolia.

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Andromeda Tetragona.

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Betula Nana.

height, and is one-flowered. Among the plants of this cove are a Delphinium, a Dodecatheon, and an Aretia; also many undescribed species of those truly arctic genera, Gentiana, Saxifraga, Astragalus, Artemisia, Draba, Ranunculus, and Claytonia.

The island of St. Lawrence, situated 2° more to the south, does not differ in vegetation from the cove of the same name. The Andromeda tetragona (*fig.* 681.), Dryas octopetala,

Diapensia lapponica, and some alpine kinds of Myosotis, and a Gymnandra, clearly indicate the prevailing character of its productions. The naturalists who have visited this island remarked, however, that, on their arrival, they gathered more flowers there in the first few minutes, than during many weeks' investigation on the range of islands comprising Radack, &c., situated between the tropics. Here grow Alnus incana, in a very diminutive state, and Spiræa chamædrifolia, both of which are natives of Kamtchatka, but not of Oonalashka; and which a severer atmosphere seems to have banished from St. Lawrence's cove. An Orobanche and a Pinguicula are among the plants of this island. Cineraria palustris vegetates with remarkable luxuriance in the well-watered slopes formed at the base of the mounds of ice; while Betula nana (*fig.* 682.) is seen even on the very shores. The plain country of this island is free from snow throughout the summer.

Subsect. 3.—*Zoology.*

Our knowledge of the Zoology of Siberia and of Asiatic Russia is chiefly derived from the researches of the celebrated Pallas. The ungenial nature of the climate, the sandy and arid steppes and rocks by which these regions are everywhere intersected, and the total absence of umbrageous forests, at once account for the paucity of species appropriated to this immense territory. The assertion, therefore, made by Pennant, that Siberia is hardly less interesting than America, in the number and novelty of its animals, is singularly inaccurate: the proportion not being more, probably, than one to fifteen. There scarcely appears, in fact, either among the quadrupeds or birds of Siberia, one genus which is not common to the European zoological region: although the following list of quadrupeds will exhibit several species appparently confined to the eastward of the Ural mountains and the shores of Lake Baïkal.

The Quadrupeds more particularly belonging to Siberia are the following:

Putorius sibiricus. Siberian Weasel.
Canis Sibiricus. Siberian Dog.
Phoca leporinus. Hare Seal.
Otaria ursina. Sea Bear.
Otaria jubata. Sea Lion.
Arvicola arvalis. Field Mouse.
Arvicola œconomis. Economic Field Mouse.
Arvicola saxatilis. Rock Mouse.
Arvicola alliarius. Garlic Mouse.
Arvicola rutilans. Red Mouse.
Arvicola gregalis. Baikal Mouse.
Arvicola socialis. Social Mouse.
Arvicola Aspalax. Siberian Leming.
Phoca bothnica. Baïkal Seal.
Phoca sibirica. Siberian Seal.
Georynchus talpinus. Mole-like Leming.
Georynchus torquatus. Ringed Leming.
Mus Coraco. Coraco Rat.
Mus agrarius. Sitnic Mouse.
Mus subtilis. Subtle Mouse.
Cricetus migratorius. Siberian Hamster.
Cricetus arenarius. Sand Hamster.
Cricetus Songarus. Songar Hamster.

In addition to the above, travellers enumerate several others, common alike to the two Russias and the neighbouring regions, as the Rein-deer, Elk, Bear, Wolf, Fox, Marmot, Martin, &c.; but these have been already noticed as inhabitants of Europe.

The Economic Mouse, as one of the most interesting animals, deserves a particular notice. These little creatures form burrows, with wonderful skill, in soft turfy ground. There are sometimes near thirty different entrances to the principal chamber; close to this are other caverns, used as granaries for their winter provisions. These stores they gather in summer, and in damp seasons will frequently bring them out to dry in the sun; they will not touch these hoards until the time of need, living in the interim on such other food as can be supplied from over-abundance. On the approach of winter, the male and female, who have hitherto been separate, mutually retire to their well-stored dwelling, and pass this rigorous season in ease and plenty, living upon the fruits of their former industry and forethought.

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Greenland Seal.

Of the aquatic Quadrupeds, the Phoca grœnlandica (*fig.* 683.), and numerous other Seals, appear on the frozen shores of the North and White Seas, and different varieties on those of Lake Baïkal. The northern Stellerus (S. borealis Cuv.), long confounded with the Manati of India, represents that unwieldy animal in the seas of Kamtchatka.

An immense species of Elephant, now extinct, appears to have formerly belonged to the frozen regions of Siberia; an entire specimen having emerged, not many years ago, from a mass of ice on the shores of the White Sea. Its skeleton is now in Russia, and proves it to be distinct both from the Indian and the African species. The enormous tusks occasionally found, and said to weigh, sometimes, 600 lbs., have been inconsiderately assigned to the wild boar; but they no doubt belonged to this, or some fossil species of equally gigantic size.

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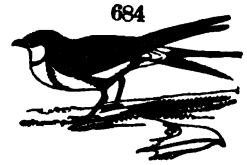

Swallow-tailed Pratincole.

Of the Birds, our information is very defective. Pallas enumerates several, unknown to Europe; but they are small, and not generally interesting. The Great Bustard of Europe is spread over the deserts, with the Swallow-tailed Pratincole (*fig.* 684.), a restless and clamorous bird, of rare occurrence in Europe. Partridges, Quails, and the smaller gallinaceous birds, are common; but the larger and more splendid Pheasants begin only to appear on the confines of central Asia and towards Persia.

The Domestic Animals are much the same as those of European Russia.

SECT. III.—*Historical Geography.*

The rude regions of Siberia have but recently attracted the notice of the historian. No portion of it was included by the Greeks and Romans in their idea of the known or habitable world. The Scythians, the same pastoral tribe who occupy the regions of modern Tartary, were in their eyes the remotest people of Asia; the regions on the Jaxartes appeared to terminate Scythia.

The modern Tartar conquerors, of whom Zingis, the greatest, had territories immediately bordering on this region, might have been expected both to explore and conquer Siberia. Although, however, traditions were found by Carpini, which showed a knowledge extending as far as Kamtchatka, it does not appear that much impression was ever made beyond the chain of mountains which separates these two regions of Asia. Formidable barriers of nature here arrested their efforts; and the current of their progress and conquest was always directed to the more tempting regions of the south.

It was reserved for Russia, after she had shaken off the Tartar yoke, and become a great and powerful kingdom, to penetrate the secrets of this bleak and unknown region. Yet the first entry was from the province of Archangel, into its most dreary and unpromising quarter. The Samoyedes, inhabiting the Lower Obi, and the shores of the Frozen Ocean, were accustomed to come to the banks of the Dwina, to exchange their skins and furs for Dutch toys and other articles suited to their taste. Anika Strogonoff, an enterprising individual, conceived the idea of extending this trade by penetrating into the districts whence these valuable furs were brought. He obtained considerable wealth by this traffic, and at last persuaded several of the leading people among that simple race to repair to Moscow. The mere view of the pomp and luxury of the Russian court is said by the writers of that nation to have so strongly acted upon their minds, that they agreed to acknowledge the supremacy of the czar, and even to pay him a small tribute of furs. That prince soon availed himself of his newly acquired dominion to build on the Obi forts composed of logs cemented with earth, and to people this tract by making it a place of banishment for criminals, particularly those condemned or suspected of offences against the state. Siberian discovery assumed a more active character, in consequence of other remarkable events. Ivan Vassilevitch II., having driven the Tartars before him as far as the Caspian, found his power defied and his commercial views obstructed, by a band of daring nomadic warriors, who, under the name of Cossacks, have since been the bulwark of the empire. At that time, it required the exertion of all its force to root them out; and Yermak, their gallant chief, with about 6000 followers, refusing to submit, fled eastward into southern Siberia. In seeking to obtain settlements there, he was opposed by the Tartar prince who reigned over that tract; but, having gained a complete victory over him, he found himself in his capital, Sibir, at the head of a more extensive kingdom than that which he had lost. Being still pressed, however, by the arms of the Russians, he could maintain his place only by acknowledging the supremacy of the czar, and reigning as his viceroy. Yermak having soon after fallen into an ambush laid by the Tartars, and lost his life, the dominion of Siberia reverted entire to the Muscovite prince. The facility with which it appeared that these extensive kingdoms might be traversed and conquered afforded encouragement to persevere. Orders were sent to the garrison at Narym to advance eastward. After a somewhat painful march through the dreary steppe of Baraba, they came to the fine pastoral regions watered by the Yeniseï. Here they found the Tunguses, a people new in form and aspect; and who, being gentle, and few in number, were easily induced to admit a light sway, and to pay a moderate tribute of furs. In descending the Angara, however, they came upon a tribe of different temper, the Burats, a branch of the fierce Mongol race, who showed no disposition tamely to resign their independence. The Russians paused in this direction; but found on their left along the Lena an almost unoccupied region, bleak and dreary indeed, but abounding in furs of the finest quality. The Cossacks pushed on, therefore, undeterred by the snow and ice, which, during most of the year, involved this wild extremity of Asia; and, in 1639, fifty years after the commencement of this career, one of their number, Dimitrei Kopilof, arrived at the shores of the Gulf of Okotsk, a branch of the ocean boundary of Asia. Meantime, additional forces being brought forward at length compelled the submission of the hardy races on the Angara and round the Baïkal; every thing yielded till they came to the banks of the Amoor. Here they met the power of China, incorporated with that of its Tartar conquerors; and though, even in this combined state, that empire was much inferior to Russia in a warlike capacity, yet, being on its own ground, it could bring a greater force of somewhat disciplined troops. The issue of this contest was the repulse of the Russians within the line of the Amoor and behind that of the mountains, and the establishment of China in full dominion over the desolate course of that great river. Neither of these powers have since attempted to pass those pastoral boundaries which form the distant frontier of each; and Russia has remained in peaceable possession of an empire which, if measured by superficial extent, would considerably surpass that of Alexander or the Cæsars.

After this empire was acquired, however, some grand problems respecting its boundaries

remained to be solved. The most important was, whether it communicated with the ocean on the east; which last involved also the question if Asia and America were or were not joined to each other. These questions had early appeared of deep interest to the great maritime nations of the west, chiefly because an open passage by the north of Asia promised a shorter route to India than that by the Cape. For this object a series of expeditions were undertaken by some of the first naval men of the age, both English and Dutch, who conducted them with characteristic boldness, not dismayed even by the tragical catastrophes which terminated the career of several. None, however, were ever able to pass the frozen barriers opposed by the coasts of Nova Zembla and of the Gulf of Obi immediately beyond. These attempts were relinquished in despair; yet the Dutch, when Peter the Great paid them his extraordinary visit as an apprentice in navigation, pressed upon him the importance of applying his superior means to the solution of these great problems. Peter sent instructions to Yakoutsk, to make every inquiry respecting the maritime boundaries of the Siberian territory, and particularly its relation with America. He never appears to have known what Müller claims the credit of having discovered during his visit to Yakoutsk, that there were buried in the archives of that place narratives of most important discoveries on these very points, which were then forgotten. From the year 1636, expeditions were sent down the easterly rivers Lena, Indigirka, Alaska, and Kolima, which ascertained the termination of these rivers, and the continuity of the ocean into which they fell. In 1646, a company of merchants undertook the first voyage eastward from the Kolima, and actually reached the territory of the Tchutchi, the rude tenants of the north-eastern peninsula of Asia. This was followed, in 1648, by a more important expedition, undertaken by two Cossack chiefs, Deschnew and Ankudinow. The latter was wrecked near the isthmus at the mouth of the peninsula; but Deschnew, after various adventures, suffered shipwreck, at the end of the year, on the river Olutera, south of the Anadir. This would imply that he had rounded the north-eastern points of Asia, and ascertained the disjunction of the two continents; and this appears the most probable supposition: though the great imperfection of his journal still left room to assert, that he had passed from one ocean to the other, merely by crossing the isthmus of the Tchutchi peninsula.

At the very close of the seventeenth century, the sphere of Russian knowledge and dominion was extended to the peninsula of Kamtchatka, neither a fine nor valuable territory, but presenting, both as to the country and inhabitants, an entirely different aspect from the rest of the empire. Here, launched on the Eastern Ocean, the Russians found themselves, as it were, in a new world; they saw the long chain of the Kuriles, terminating in the large islands of Saghalien and Jesso, and, beyond these, the great and fine islands which compose the empire of Japan. Their discoveries were now linked with those of the great maritime nations of Western Europe, and had thrown a pretty full light on the whole of the extreme east of Asia. No less important was the era when it was ascertained that some large islands, reported to exist in the ocean to the east, were fragments of the corresponding coast of America, and that this coast approached closely, if it did not actually join, the new shores occupied by Russia.

The report of these interesting discoveries reached Petersburg when the throne of Peter the Great was occupied by his relict, Catherine I.; a princess who at once revered his memory and inherited a portion of his spirit. She entered with zeal into the projects of discovery, and formed a regular plan for completing it. Several connected expeditions, proceeding at once from the northern and eastern coasts, were appointed to explore thoroughly the remotest limits of her vast eastern dominion. In 1726, Captains Spangberg, Behring, and Tchirikow set out from Petersburg on this destination, and were afterwards joined by the eminent mathematician Delisle de la Croyère. These expeditions did not answer all the expectations formed of them; but in 1728, Behring discovered the Straits which bear his name, and was there informed that, after passing beyond a cape about 200 miles distant, the direction of the coast became entirely westward. He reached this cape, where, seeing the coast, as far as the eye could reach, actually run in that direction, he conceived that he had passed the extreme point of Asia, and inferred the entire disjunction of that continent from America; a just conclusion, on hasty premises; for this coast takes another circuit to form the peninsula of the Tchutchi, before its final western direction. Behring and Tchirikow, also, in 1741, sailed across, and made considerable discoveries in the hitherto almost unknown coast of north-western America.

After this time the spirit of discovery on the part of Russia seems to have slumbered, and the next great light thrown upon these regions was by Cook, the immortal British navigator. After exploring a great part of the north coast of America, he sailed through Behring's Straits, and along a considerable portion of the opposite coasts of the two continents; when their respective lines were found decidedly receding from each other, one to the east and the other to the west. The separation of the continents appeared then to be ascertained; yet it was surmised, that their coasts might approximate, and, by a long circuit, unite with each other. This supposition has been completely negatived by subsequent voyages.

SECT. IV.—*Political Geography.*

European and Asiatic Russia are subject alike to the same simple government, that of a pure despotism, in which the absolute power of the sovereign is liable to no check whatever, either on the part of the nobles or the people. Siberia is in this respect even less fortunate than Russia, since the sway exercised over it does not rest on custom or opinion, but is enforced by the constant presence of a foreign military force. In Asia, as in Europe, however, this sway is mild, and tempered even with an active regard to the introduction of knowledge and civilisation, into regions which were before destitute of all these blessings. Yet Siberia shares more distantly the beneficent and enlightened spirit which has actuated the Russian cabinet. Officers so far removed from the seat of government have greater opportunity and temptation to abuse their power; and the native tribes have retained, almost unaltered, all the rude habits of their former life. Still, they have been checked in that career of intestine war in which they were otherwise likely to be almost perpetually involved; and whatever exists in this vast region of the habits and comforts of civilised life has been introduced by the colonisation and conquests of Russia.

Siberia may be divided into two great regions, Western Siberia and Eastern Siberia. Western Siberia includes the governments of Tobolsk, Tomsk, and Yeniseisk, and the province of Omsk; the Eastern includes the government of Irkoutsk, the province of Yakutsk, the districts Okotsk and Kamtchatka, and the countries of the Kirghises and the Tchutchi. Although the intentions of the general government are good, it is inevitable that, in the distant establishments, opportunity must be given both for embezzlement and oppression. "God is high, and the emperor far off," is said to be a maxim extensively acted on. In the naval department of Okotsk, such laxity prevailed, that it was customary for an officer, whenever he wanted money, to step into the dockyard, take out articles to the requisite amount, and sell them for his own advantage. Much, however, has lately been done to remedy these abuses; and the administration at the central seats of government is said to be at present very good.

The Cossacks, the military force by which Siberia is held in subjection, compose also the bulk of the Russian inhabitants. In the government of Tobolsk, Giorgi supposes them to amount to 22,000. Two regiments are stationed at Tobolsk, the same number at Tomsk, at Irkoutsk, and in the government of Krasnoyarsk. A large proportion, however, are employed to garrison the chain of *ostrogs*, or wooden forts, formed along the Irtysch and the line of the Kirghises, to protect the frontier against the inroads of that lawless and daring people. A smaller number is necessary along the Chinese frontier, comparatively well ordered and pacific, and likewise among the thinly scattered and quiet occupants of the northern plains and rivers. In Kamtchatka, however, a considerable force is maintained.

SECT. V.—*Productive Industry.*

Agricultural industry affords less wealth to Siberia than to any other region of equal extent. The greater proportion of it must indeed be confessed to have been unfitted by nature for this important pursuit. Throughout all the northern tracts, the earth is bound in perpetual frost. Yakoutsk, the most northerly town of any magnitude, possesses a rich soil, and the inhabitants attempt to raise a little rye; but in a climate where, at the beginning of June, the earth is still deeply frozen, the ripening even of this crop is ever a matter of complete uncertainty. The limitary mountains, also, which form the land-boundaries of Siberia, bear nothing but pines and other hardy trees of a northern region. Even that broad level belt which, in the south, extends under a tolerably mild climate, consists in a great measure of those marshy and saline steppes which yield only rank and unwholesome vegetation. Various tracts, indeed, along the upper part of the Irtysch, as well as along the Tobol, the Izet, and others of its tributaries, are covered with luxuriant pastures, and might yield very rich crops. Culture, however, is limited, not only by the indolence of the inhabitants and the want of a distant market, but by the almost exclusive taste of the Tartar inhabitants for pasturage, and particularly the rearing of horses. Even under the last head, Pallas complains that, in their eagerness to procure mares' milk for the purpose of converting it into *koumiss*, they rob the foals of their due, and also that they do not make sufficient provision for their winter subsistence; yet he cannot deny that they contrive to rear a very fine breed. Even of grain, amid all their neglect, the produce is so plentiful, that its cheapness, as well as that of animal food in the great cities of Siberia, is almost incredible. Pallas, at Tomsk, found oatmeal selling from a halfpenny to three farthings per peck; an ox at five shillings; while an excellent horse was considered dear at ten shillings. Gmelin asserts, that at Tobolsk a man may live comfortably on an annual income of a guinea and a half. The very finest district of Siberia appears to be that along the Upper Yeniseï and the Angara, from Krasnoyarsk to Irkoutsk. Immense crops, not of wheat, indeed, but of oats, barley, and rye, are produced without the aid of manure, which, in a soil so luxuriant, is said to be even injurious.

Manufactures can scarcely be said to exist in Siberia; we therefore pass to mines, which

form a most extensive part of her exchangeable wealth, and in which she may rank with the richest countries in the world. No sooner has the traveller passed the Urals, than he finds himself in a sort of mineral empire, and sees metals of almost every kind extracted almost in every possible manner from the bowels of the earth. Gold, indeed, may be said rather to have given splendour and celebrity to the mines of Catherinenberg, than to have yielded any considerable profit. In the course of thirty-four years their entire produce did not exceed 1,200,000 rubles. The metal is found in quartz diffused through a ferruginous pyrites. Of late, however, it appears that sands impregnated with gold have been discovered, from which it has been drawn in much larger quantity. A late traveller conceives that these auriferous sands are diffused over a space of 1000 miles along this chain. The produce in 1828 was 318 poods (about 53 tons), which Humboldt values at 727,000*l*. The rare metal of platina is also drawn in considerable quantity from the Urals. They are not so rich in silver as some of the mountains of the interior, but the supply of copper and iron is truly immense. In the year 1782, the quantity of copper drawn from both sides of the chain, but chiefly the Siberian, was 190,000 poods (about 31,500 tons); of iron nearly 400,000 poods, or 66,000 tons. Almost all these mines are worked on behalf of the government, with slaves, who consist chiefly of banished convicts. The yearly wages of these unfortunate persons are limited to 13*s*. 6*d*., with a suit of clothes; and for subsistence their daily allowance is only two pounds of bad bread. The superintendents fared tolerably, when, in the days of Catherine, they were allowed 3*s*. 4*d*. per day, in good coin; but as this rate has never been augmented, and is now paid in paper depreciated 75 per cent., it amounts only to a miserable pittance. The consequence is, that embezzlement has become almost a fundamental part of the system; and, being accompanied with the waste and mismanagement too common in such great public works, has reduced the profits of government to a very small amount.

The other great mineral range is that of the Altaï; and it is remarkable as being perforated throughout by ancient works carried on by a nation now unknown, and which have been long abandoned. If gold is less copious here than in the Urals, this deficiency is amply compensated by the mines of silver, which are so numerous that, according to Captain Cochrane, the whole district may be said to be silver. The original mines at Kolyvan itself are now fallen into comparative neglect, owing, perhaps, to the deficiency of wood. The chief present scene of operations is in the Schlangenberg, the loftiest of the mountains in this part of the Altaï, and which, on the removal of its slate covering, presents an almost unbroken mineral mass of ores of gold, silver, and copper. In twenty-two years, it yielded 12,348 pounds of gold, and 324,000 pounds of silver. Copper, however, is the most valuable metal; for the iron, though inexhaustible, is considered scarcely fit to bear the expenses of transport. As soon as the ores are extracted, they are conveyed to Barnaoul, where forges on the most extensive scale are prepared to smelt and refine them. Twelve thousand horses and oxen, and 1500 workmen, are employed in this conveyance; and the entire number of persons engaged in the mineral operations is 13,000 constantly, and 55,000 occasionally; the latter being employed also as peasants to cultivate the ground. The entire value of the produce is 4,500,000 rubles, or 200,000*l*. sterling. Although the labourers are all serfs of the crown, and the wages very small, the extreme cheapness of provisions makes them tolerably comfortable; and the works, upon the whole, are managed much better and more advantageously for all concerned, than those of Catharinenberg. Silver forms also the prominent feature in the mines of Daouria at Argunsk, on the extreme frontier in the southern part of the province of Nertschinsk. In the beginning of the present century, they produce annually from 40,000 to 60,000 lbs. of silver; but recent details are wanting respecting their management and value. The entire produce of silver in Siberia is stated, in 1828, to have amounted to 1093 poods, which Humboldt estimates at 158,000*l*.

In simple minerals, Siberia is also very rich; and these, though not so splendid as those of Southern Asia, present, perhaps, a greater variety. The topaz and the chrysolite are found at Mursinsk, among the Urals, which yield also the beautiful ore of copper, called Malachite, and very fine rock crystals, some of which, of a green colour, have even been mistaken for emeralds. The mountains of Daouria, and those round the Baïkal, produce the topaz, the beryl, the onyx, lapis lazuli, and red garnets. In 1829 the diamond, and in 1831 the emerald were discovered in the Urals; but the extent of their produce is not yet ascertained. A remarkable and useful product is afforded by the mines of talc in eastern Siberia, particularly on the banks of the Wittim. This mineral supplies the place of glass over all Asiatic and part of European Russia. It is in many cases equally transparent, without being liable to break. It is divided by the insertion of a knife into thin laminæ, which, like pieces of glass, are valuable in proportion to their size. The rock salt at Solikamskoi, in the Urals, is worked to a great extent, and conveyed in huge wagons to Petersburg. Those singular efflorescences called rock marrow and rock butter are chiefly objects of curiosity, though the former is eaten by the Tunguses with milk, and the latter is sometimes employed in medicine.

Second in value to mineral products, or even rivalling them, are those of the chase; a

source of wealth no longer regarded as such in any part of the civilised world. In the eastern and northern parts of Siberia, on the contrary, the rich and soft furs with which nature has protected the animal creation from the rigour of the climate, form one of the most valuable articles of commerce. The most esteemed have always been those yielded by that species of weasel called the sable. Yakoutsk is the great market for them; and those obtained on the banks of the Wittim and the Olekma are reckoned the best, selling at from 15 to 20 pounds a pair. In the lapse of ages, however, their numbers have been thinned by hunting; and it is necessary to go to Kamtchatka to find them numerous, though of inferior excellence. Great address is employed to take this animal, without injuring its skin. Sometimes it is struck by a species of arrow with a blunted point; at other times it is closely pursued till it runs up a tree, when the hunter kindles a fire beneath, upon which the sable drops down, and is caught in nets. Next to the sable ranks the black fox, of whose skin the very fine specimens sell sometimes for thirty pounds, and five pounds is a very ordinary price. The skins of the red and gray fox do not sell for more than two or three pounds. Those even of the bear and the wolf have a certain value. Among the useful animals of Siberia, it is impossible to pass over the rein-deer and the dog. The former are found in every part of Asiatic Russia, but chiefly on the bleak shores of the Northern Ocean, and among the Samoyedes; to whom, as to the Laplanders, they supply milk, clothes, and the means of rapid conveyance over the vast plains of ice. Only those taken in hunting are killed for the sake of the flesh. It is not in Kamtchatka only that the strong and well-trained Siberian dog is used as an animal of labour, and particularly in transporting sledges over the ice.

The supply of fish, both in the rivers and the seas of Siberia, is inexhaustible, and only the distance and difficulty of transport prevent this from being an immense source of wealth. The Obi, and still more the Irtysch, abound with a very great variety of excellent species; including, besides those found in other rivers, sturgeon of peculiarly fine quality, very large sperlings, and several species peculiar to these rivers. The Yeniseï and the Lena are chiefly remarkable for fine varieties of salmon and trout. But it is the eastern bays of Asia, and the seas thence extending to America, that swarm with life in a degree almost unexampled. The most remarkable are those huge marine animals, the tenants of the frozen seas, against the cold of which they are fenced by thick skins, and a substance almost entirely composed of fat and oil. Whales take the lead among this class; but the coast seems peculiarly to swarm with the minor species, seals, otters, sea-calves, sea-wolves, and others of the same species. The skins of these animals, however, are the only part of them which can bear a transportation across the immense breadth of Siberia. Those of the sea-otter are said by Captain Cochrane to sell at from 10*l.* to 30*l.* in the market of Yakoutsk. The abundance of these and of ordinary fish maintains the eastern shores and islands in a state of plenty, independent of agriculture or pasturage. Indeed, we can scarcely credit the statement of Captain Cochrane, that 600 persons, inhabitants of the district of Nischnei-Kolymsk, consume between themselves and their dogs, 2,000,000 pounds annually; making fifty pounds a day to each person. Probably the fishery along the northern shore would not be less abundant; but the difficulty of carrying it on in frozen seas, and the cost of conveying its products, have hitherto prevented the Russians from attempting its prosecution to any extent. The numerous little lakes, the marshes, and inundated grounds of Siberia are covered with vast flights of waterfowl; and wild ducks, wild geese, swans, &c. afford an important resource to the inhabitants. On the whole, Siberia, particularly in its eastern tracts, would be the first country in the world for the sportsman, could he bring himself to endure the relegation from society which a residence in it would impose.

In no country has commerce to struggle against so many disadvantages. Its northern seas are barred by ice; its eastern are too distant to hold any intercourse with the civilised world. The land communication from St. Petersburg extends over very little less than half the breadth of the globe, through tracts sometimes buried in snow, sometimes impassable by inundation, and sometimes destitute, for hundreds of miles, of a human habitation. Its rivers, though magnificent, all cross this great line at right angles, and consequently afford no accommodation for transit, except by ascending and descending the winding course of their tributaries, with frequent and laborious portages from one to the other. The country all round the frontier, and to a certain extent within, is infested by predatory hordes. Yet, under all this accumulation of obstacles, the commercial spirit in Siberia is active. The Russian inhabitants, with the exception of the officers of government and the exiles, are almost all merchants, who, having taken up their abode in this dreary region under the hope of making a fortune with some facility, prosecute this object with indefatigable zeal. The transactions generally being of that speculative and adventurous cast which afford a chance of great gain, are attractive to bold and sanguine spirits.

The great line of Siberian commerce, that leading from Petersburg by Moscow, Nischnei-Novogorod, Kasan, and Perm, crosses the Urals at Catherinenberg. It then proceeds direct to Tobolsk, and from that capital almost due east by Tomsk and Krasnoyarsk to Irkoutsk. The first of these places, with the Barabinski steppe, which precedes it, is sometimes avoided

by ascending the Irtysch, and taking the route of Omsk and Barnaoul. At Irkoutsk, Russian commerce branches out into two great opposite lines. One of these crosses the Baïkal and ascends the Selinga, to the contiguous towns of Kiakhta and Maimatchin, which form the solitary point of commercial intercourse between the two great empires of Russia and China. Almost all the principal houses in Russia have an agent at Kiakhta; while the Chinese traffickers consist chiefly of temporary visiters, who are not even allowed to bring their families. The Russians here receive the staples of China; tea, porcelain, silk, cotton, rhubarb, tobacco, with a variety of those little ornamental works in which that nation excels: in return for which, they give furs, skins, coarse cloths of various kinds, cattle, and glass. The value of articles exchanged on each side is supposed to amount annually to between 200,000*l.* and 300,000*l.*

The other commercial line, branching from Irkoutsk, is that which descends the Lena into the heart of the frozen regions, and to the shores of the Eastern Ocean. Yakoutsk, about 800 miles down the Lena, forms the market at which the furs and other precious products of this desolate region are collected. They arrive, not only from all the surrounding wastes, but from Okotsk, which collects those of Kamtchatka and of north-western America, and even from the remote north-east angle of Asia, which forms the peninsula of the Tchutchi. A considerable proportion consists of the tribute to government, which is easily paid, and profitably received in kind. The rest is obtained by the wandering traffickers, in exchange for tobacco, spirits, cutlery, beads, and toys.

Sect. VI.—*Civil and Social State.*

According to an enumeration made in 1801, the population of Siberia amounted to 1,038,356; of whom 515,114 were male, and 523,242 female. Considerable as this amount is in itself, yet, if we reckon the superficial extent at 5,000,000 square miles, we shall not have much more than one inhabitant to every five miles.

This very scanty population consists of two very distinct portions, the foreign rulers and the native tribes. The latter, also, have scarcely any common relation, except that of having been all subdued by Russia. It will be necessary, therefore, to consider separately these different races.

The Russian inhabitants are composed chiefly of that unfortunate class who have been exiled into these remote regions for various offences, chiefly those which excited the alarm of a jealous and absolute government. A basis was formed by the Swedish officers made prisoners at the battle of Pultowa, and a regular succession of recruits has since been furnished from the empire itself. As they were often men of cultivated minds and polished manners, and as, according to Captain Cochrane, "no government ever banishes fools," they, with their posterity, have formed at Tobolsk a society which has appeared agreeable even to those accustomed to that of the most refined European cities. Of the humbler class of convicts, those considered most incorrigible are plunged into the mines, where they are strictly watched, and subjected, as we have seen, to hard labour and hard fare. A class, whose offences are milder, find a place in the distilleries; while a third, who rank a step higher, receive grants of land, for which they pay only at the rate of eight rubles for each male head. These are formed into villages, where, according to M. Ermann, the strict police, and the miserable state of those who attempt to find refuge in the surrounding deserts, generally deter them from a repetition of the offences for which they were banished. Mr. Holman, however, complains that some make their escape, and form themselves into plundering bands, who infest the high roads; but they generally fall victims at no distant period.

The two great capitals of Siberia, Tobolsk and Irkoutsk, have acquired, to a considerable extent, the polish of European society. In Tobolsk, as already observed, the basis of the population consists of exiles and their descendants, often men of rank and intelligence. In Irkoutsk, the merchants and the military officers, constantly passing and repassing from Europe, have imported its most recent manners, literature, and arts. Sievers, in 1790, found a small public library, a collection of natural history, and even a theatre, on which were represented some pieces of native production that were pretty tolerable. At Tobolsk, Kotzebue saw some of his own dramas performed; which was a great advance since Gmelin's visit, when the pieces resembled the European mysteries of the middle ages, in which Adam, Noah, and the Devil acted the principal parts. Hospitality, the virtue of rude and recluse regions, is said to be most liberally exercised throughout Siberia. On the other hand, the Russian vice of drunkenness seems to be copied with most ample addition. In the small provincial towns, above all, where little exists to refine and animate society; where the facility of subsistence allows, and the severity of the climate compels, a great portion of time to be spent in indolence, it seems to be carried often to a most deplorable extent; and it then becomes, of course, accompanied with other species of dissoluteness. We regret that, from the narrations of the most recent travellers, the inhabitants of these provincial districts do not appear to have improved in this respect, or to have shaken off those slothful habits to which a great part of them have long been addicted.

Of the native Siberian races, those which occupy the whole southern frontier are Tartar, both in their origin and character; and that people, indeed, until their conquest by the Russians, held the supreme sway in Siberia. West of the Irtysch, the prevailing race are those called Baschkirs; between that river and the Yeniseï are the Sluschivies, the Tzulimm, and other small local tribes; while the regions round the Baïkal, and to the south of it, are occupied by the Burats, a division of the Mongol family. All these Tartars are attached to the general habits of their countrymen; a wandering life, occupied almost exclusively in the rearing of cattle, and particularly of horses; making horse-flesh and fermented mares' milk their favourite luxuries. The sway of Russia has been in so far salutary as it has suppressed that system of perpetual war and plunder which was formerly carried on by them, and which still prevails in all the countries of Independent Tartary. Their activity is now more laudably turned to the multiplication of their flocks and herds, and sometimes to a limited degree of agriculture; though they have never duly improved in this respect the capacities of some of the tracts which they inhabit. In the western districts, as in the corresponding parts of Tartary, the Mahometan religion is followed; but, over all the east, full sway is held by that modification of the Indian system of Boodh which is called the Shaman religion. Sievers lately visited, beyond the Baïkal, the residence of the Bandida Lama, the great head of this religion, so far as concerns Siberia. The ceremonies do not seem to have materially differed from those which Turner observed to be practised in Thibet. A splendid throne was erected for the Lama himself, while the inferior priests, clothed in red, sat in successive rows. Numerous images were placed upon the altar, or ranged along the walls, to which were presented rice, brandy, and, on solemn occasions, a fowl or even a sheep roasted whole. Their sacred music was of the same noisy character. Kettle-drums, trumpets eight feet long, sea conchs, and others of the most powerful instruments of sound, produced a thundering and tremendous concert. These genuine Shamans, however, reject as heretical the bulk of their professed fellow-worshippers in this religion, who, in fact, introduce largely that mixture of magic and witchcraft which has always formed the favourite superstition of the north. The impostors who practise it, both male and female, endeavour to attract the admiration of the ignorant natives by huge horns or drums, throwing themselves into hideous contortions, and even giving themselves stabs in vital parts, from which blood, previously provided by them, appears to flow; but all this is done in so clumsy a manner, that it is at once detected by an European scrutiny. In the late enumeration, the Burats amounted to 49,761 males, and 47,932 females; while the Mongols proper were not more than 12,000.

Among the thoroughly native tribes of Siberia, the most remarkable are the Tunguses. They are chiefly found in the extensive region watered by the Yeniseï and its tributaries the Toungouskas. Unlike the Tartars, they possess no herds, except those of rein-deer; and their sole employments are hunting and fishing along the frozen plains and the bleak shores of the great Siberian rivers. They use no arms in the chase except the bow and arrow, in which they are so skilful, that they fear not to attack the strongest and fiercest animals. As it is very desirable, however, not to injure the precious skins of the fur-bearing species, they are rather desirous to take them by art or stratagem, and show wonderful ingenuity in the contrivances which they employ for that purpose. They are not less skilful in tracing out by scent, or by the faintest track, the animals which they pursue. In fishing, they use little boats composed of the rind of the birch or of the larch tree. They have no settled abodes, but wander from place to place, guided by the abundance of fish and game, or by the mere love of change. It costs them very little trouble to construct temporary abodes. The yourt, or summer hut, is formed merely by arranging in a circular shape a number of wooden poles, and giving them a conical roof of the bark of the birch tree. Their winter abodes also consist of one single apartment, the wooden walls of which are more strongly put together, and the windows are formed of expanded bladder. The oven which heats the apartment and cooks the victuals is placed in a corner; and round the room are benches, on which the family sit, eat, and sleep; and which, being hollow, contain their stores and provisions. The smoke makes its way through an aperture in the roof stuffed with dry grass to exclude the cold; in its way thither it fills the entire hut, but, its own lightness causing it to ascend, there is left a space near the floor not absolutely enveloped. The Tunguses are of a brownish tint, derived, perhaps, from the atmosphere of smoky huts; their features are flat, and their eyes small; though neither of these characters occurs to nearly the same extent as in the Mongol race, nor have they its peculiar physiognomy. They are described, by those who have held intercourse with them, in terms of praise, as frank, stout, honest, and brave. Though professed votaries of the Shaman creed, they combine it much more than the Burat tribes with magical observances and other native superstitions.

The Yakoutes occupy the banks of the Lena, and all the extent of wide and desolate plains which reach thence to the Eastern Ocean. The inroad of the Mongols and Burats is supposed to have driven them from the more southern tracts which they originally occupied. Their pursuits and habits of life much resemble those of the Tunguses, though they

are considered, on the whole, as less daring and active. Far to the north, in particular, they dwindle into a poor and stunted race. Unable to procure bread, they have become, in a great measure, indifferent to it; and their vegetable food consists of various roots, as onions, garlic, and berries, which many parts of their territory produce in peculiar excellence. The superstitious habits which generally prevail among the natives of Siberia seem to have arrived at their utmost pitch among the Yakoutes. They reckon thirteen kinds of evil spirits, with the dread of which they are perpetually haunted; and the influence enjoyed by their magicians is unbounded. Their numbers, according to the census of 1801, amounted to 42,956 males, and 41,607 females.

The Ostiaks are a numerous Siberian tribe, occupying the banks of the Lower Obi with its tributaries, and the plains which extend far on each side of it. Their size is somewhat diminutive; their hair, of a yellow or reddish tint, floats on their shoulders; and their features are destitute of all beauty. Their habitations, both of summer and winter, are nearly similar to those of the Tunguses, except that the latter frequently contain two or three families, divided by slight partitions, and having one common fireplace. They depend for subsistence chiefly on fishing, though they give chase to the bear and various fur-bearing animals; the finest of which, however, are now found only in the eastern regions. In these pursuits they display indefatigable activity, which their detractors impute to the pressure of want, since they show a disposition, when opportunity serves, to sink into indolent habits. They are said to be distinguished by great simplicity of manners, goodness of heart, and open hospitality. Their superstition is entirely that of the old rude paganism, without any Hindoo or Mahometan admixture. In their tents they have many little images, before which they place a table, and lay upon it snuff, willow bark, fish oil, and whatever commodities they themselves consider most valuable. In return for these gifts, they consider as due a prosperous fishing and hunting; and when, in spite of lavish donation, these fail, their wrath is sometimes kindled against their divinities, whom they even dash on the floor, and break in pieces. The bear is the object of a sort of fearful worship; and, in their oath of allegiance to the Russian government, they wish that, if it be not fulfilled, they may be devoured by that formidable animal. Their favourite amusement consists in a species of dance, in which they imitate to the life the motions and cries of the beasts, birds, and fishes with which they are daily conversant. The population, by the census of 1801, is stated at 17,236.

To the north of all the races now surveyed, on the extreme shores of the Arctic Ocean, wander the Samoyedes, whom the poet denominates "the last of men." They present nearly the same original form as the Tunguses, but want and hardship have sunk them into a meagre and stunted race. They have a flat, round, and broad face, large thick lips, a wide and open nose, little beard, black and rough hair in small quantity. Their territory, along these dreary shores, extends for nearly 2000 miles, from the European frontier to the Olensk, and almost to the Lena. Placed in the same situation with the Laplanders, their habits and modes of life are almost entirely the same. All their wants are similarly supplied by the rein-deer; but the herds which they have tamed are employed solely for the purpose of conveyance; those only which are caught in the chase are used as food, and their skins converted into clothing. On the sea-coast they attack the bear, and feed on his flesh, as well as on that of the whales which are cast ashore. Fishing on the rivers is considered by them an easy and luxurious occupation. In autumn they are chiefly employed in hunting the white fox, the fur of which affords the only medium by which they can obtain foreign luxuries.

Sect. VII.—*Local Geography.*

In taking a survey of the local features of Siberia, beginning at its western or European extremity, we find, first, the already described mining district of Catherinenberg. It is politically attached, not to Siberia, but to the government of Perm, on the other side of the Urals. The capital, of the same name, situated near the source of the Iset, contains 2000 houses, built chiefly of wood, but some of stone; while the great manufactories are of brick roofed with thin iron plates. Here the Russian government has established the college of mines, which presides over all the founderies, 114 in number, maintained by it on both sides of the Urals.

The first territory that is wholly Siberian consists of the government of Tobolsk, which embraces the territory watered by the Tobol, the Lower Irtysch, and their tributaries. It forms an expanse of wide and watery steppes, covered with deep pastures and immense woods, and capable, in many places, were culture employed, of yielding the most luxuriant crops. Pallas particularly remarks the district of Isetsk, or the plain of the Iset, about 200 miles square of the very finest, rich, black soil, capable of growing harvests that might feed a nation; yet it does not contain above 57,391 inhabitants. Of the same character are the plains of the Lower Tobol and Ischim. Along these elevated confines of Siberia and Tartary, roam branches of the Kirghise horde, against whose inroads even the cordon formed by the powerful empire of Russia is not always a secure defence. Everywhere the

basis of the population is Tartar; the prevalent race in the interior districts is the Baschkir, rather a quiet and substantial people; but still, as among other Tartars, their industry consists in the rearing of horses, and their indulgence in the eating of horse-flesh and drinking of mares' milk. The absence of any other agricultural industry condemns regions to waste that are capable of supporting the most extensive population. As to manufacture, the only process which can deserve that name is distillery, for the products of which there exists but too extensive a demand. Even in the very large establishment of Count Schouvalof, however, the machinery is so rude, and the tubes so defective, that a quantity of steam escapes, sufficient to intoxicate the bystanders, and to kindle at the approach of a flame.

While the open country is in the possession of the Tartars, and the still ruder native tribes, the towns have a character very decidedly European. This is particularly the case of Tobolsk, the capital of this province, and of all Siberia. Its principal division is placed on a high rocky eminence overlooking a majestic plain, in which the Irtysch and the Tobol blend their mighty waters; while the horizon is closed on every side by a boundless expanse of forest. With the exception of the government houses and two churches, Tobolsk is built wholly of wood, and even the streets are paved with that material. The edifices are not constructed with any architectural skill; but the walls being white, and all the cupolas gilded, they make from their elevated site a very splendid appearance. The chief want is water, which can be procured only by a laborious carriage from the grounds below. The lower town, on the bank of the river, is Tartar, built wholly of wood, with water in abundance, but not of good quality. The basis of the social system at Tobolsk consists of exiles banished by a jealous government into their "prison of unbounded wilds;" and from causes formerly specified, the society is upon a good European model, and Tobolsk makes an agreeable residence. The literature which, in the middle of the century, Gmelin found somewhat antiquated, is now, by the frequent passage of Russian officers, brought up to the latest German standard. All the trade of Siberia passes through Tobolsk. As soon as the first influence of spring has melted the snows, the merchants are seen crowding from the west to traverse the long tract which leads to the Chinese frontier and the Eastern Ocean; and as soon as the winter sets in, similar crowds are seen returning. All the tributes of fur, collected from the tenants of the boundless deserts, are accumulated at Tobolsk.

In the southern and western parts of the province of Tobolsk are Tara on the Irtysch; Jalutorosk and Kurgan on the Tobol, and Tumen on the Taura; small towns surrounded by rich pastures, which enable the inhabitants to live in coarse abundance, and to carry on a considerable trade in timber, tallow, and hides.

To the north this region presents a very different aspect, as the Obi rolls to the Northern Ocean. Its dark and frozen waves are bordered by icy plains, or vast forests of gloomy pine, amid which a few handfuls of stunted and shivering natives erect their *yourts* or moveable tents. The Russians content themselves with maintaining here stations with a commissary and a few troops, not for the purpose of opposing a hostility which is not to be apprehended, but for collecting the fur tribute, which, though not very burdensome, would not be given quite spontaneously. Sourgout, above the junction with the Irtysch, is surrounded by a palisade, contains two churches, and 168 houses. Here grain cannot ripen; but white and black foxes, with other game, are found in abundance. Samarov, at the junction of the two rivers, is a position nearly similar. Still farther to the north is the district and post of Berezov, where domestic animals indeed may still be reared, but the rein-deer can alone be used with advantage. Finally, upon the Obi, before it opens into the great bay of that name, stands Obdorsk, a post of a few hovels and about twenty-five Cossacks, who collect the tribute of these desolate tracts. Amid the naked mountains of this northern extremity of Asia, attempts have been in vain made to introduce the plants and animals of civilised life; in a short time they have uniformly perished.

Returning to Tobolsk, and proceeding thence southwards, we come to the province of Omsk and the government of Tomsk, stretching along the Upper Irtysch and Obi, and separated from Tartary by the chain of the Altaï. Of this region, already noticed as one of the most metalliferous in the world, the produce would exceed even the vast amount of that on the Urals, were not the land carriage too heavy for the bulky metals. Though fine pasture districts exist in these provinces, as in those on the western rivers, yet they are by no means of equal extent, and a great part of their surface consists of long chains of little saline lakes. In these the mineral covers the whole bottom of the lake with a layer of the most brilliant whiteness; but there is no room for the assertion which has been founded on this appearance, and which represents them as investing it with a crust like ice. The steppe of Baraba, and others which extend along these dreary regions, are almost covered with a forest of willows and other aquatics, and the air is very pestilential. The inhabitants, as Mr. Holman informs us, believe that there are plants which emit poisonous effluvia; but this is nothing more than the usual marsh miasma. The natives here are miserably poor, living in huts half sunk in the ground, covered with long coats of sheepskin, and in perpetual fear of Tartar incursion. This last circumstance, notwithstanding all the pre-

cautions used by the government, leaves uninhabited large and fine pastoral tracts along the southern border.

The whole of this frontier presents features indicative of some great revolution, physical and political. Everywhere are found bones of elephants, buffaloes, and other huge animals, that belong to another and a distant climate, and some even to varieties that are no longer known to exist. Another feature consists in a vast number of tombs, extending along the whole of this line, and which were filled with gold and silver ornaments, coins, arms, evidently belonging to chiefs who ruled over a wealthy and powerful people. At the time of the earliest travellers, these tombs were a considerable source of wealth, and it was a regular employment to search them; but, by the latest accounts, they are now so completely rifled, as no longer to repay the trouble of examination. There are remains of edifices, but not corresponding to the grandeur of the sepulchral monuments. One ruin of considerable fame, called Semipalatnoi, or the Seven Palaces, appeared to Pallas evidently of Bucharian origin. He was much more struck by the ruins of Ablaikit, a temple which tradition reports as erected by a Calmuck prince of the name of Abloie. It was filled with upwards of forty images, representing all those huge, deformed, and often monstrous deities which are the objects of Shaman adoration. They were half male, half female; some had ten faces and seven arms; the features of others were hideous and inflamed. The edifice was sustaining daily injury from the Russian and Kirghise troops; and of the inscriptions, which were found in great abundance by the earlier travellers, only a few fragments remained.

Upon this line the Russians maintain their grand chain of fortresses, by which the frontier is imperfectly defended from the inroads of the Kirghises, Omsk, the capital of a province, contains the head-quarters, and a garrison of 4000 men, with 7500 inhabitants. This garrison, Captain Cochrane describes as maintained in admirable order. Government even supports a school for the children of the military, as well as another for those of the inhabitants. The limitary post is at Semipalatnoi, where 2000 men were stationed in garrrison under as good management as at Omsk. Here is a great rendezvous of the Tartars and Bucharians, bringing the merchandise of interior Asia, and often their plunder, to exchange for tobacco and brandy. A little farther up the Irtysch is Ubinsk, "a dirty little spot, called here a town," and at a small distance beyond is Bouktarma, close upon the boundary of the Russian and Chinese empires. Captain Cochrane describes this as one of the most romantic spots in the world. From a vast plain covered with the most luxuriant herbage, but without a tree or a shrub, a number of detached, rocky, precipitous granite mountains start up and spread in various directions. Notwithstanding the richness of the pasture with which this plain is covered, it is a complete desert; "all this fair and fertile tract is abandoned to wild beasts, merely to constitute a neutral territory."

To the east of Omsk is the government of Tomsk, the seat of those immense mineral operations which have been repeatedly noticed. Kholyvan is now nearly deserted, less from the exhaustion of the mines than of the timber, of which a large quantity is requisite, the metals being difficult of fusion. The town, therefore, is at present small, and little frequented. Barnaoul, to which, as already observed, all the metals drawn from the huge mineral mass of the Schlangenberg are brought to be smelted, is now the principal town of the government. It was found by a late traveller to contain 8000 inhabitants, and appeared the happiest, best governed, and neatest place in Siberia.

North-east of Kholyvan is Tomsk, the capital, which, lying on the high road from Tobolsk eastward, is a great thoroughfare. Being used, however, almost solely as a passage, the business done there, though enough to support a population of 9000 or 10,000, does not maintain them in any stirring or active state. Travellers agree that drunkenness, and the habit of low sensual indulgences, those besetting sins of all the Siberians, are carried to a peculiar height at Tomsk. The surrounding country, naturally very fine, wears a general aspect of misery, and is over-run with birch and brushwood. The cottages of the inhabitants are extremely poor, and the little produce that is raised is half eaten by large herds of field mice. Tomsk, however, is the centre of a considerable trade in whiskey, brought from the distilleries on the Tobol and the Iset for the supply of the eastern districts. Kutznetsk, on the Upper Tom, is a small town, the inhabitants of which live in a state of lazy abundance.

The direct and now most frequented route from Tomsk into the government of Yeniseisk, leads through the territory of Krasnoyarsk, the soil of which is among the richest in the world, and capable of yielding the most luxuriant crops, not of wheat, for which the climate is too severe, but of barley, oats, and other grain, which can endure the cold. It is cultivated with some measure of industry, by a race of Tartars, called Sluschivies, whose habits, however, are chiefly pastoral. The town contains about 3500 inhabitants, not exempt from the reigning vices of the country, but by recent accounts it appears to have been much improved by an intelligent governor.

To the north of Krasnoyarsk, in a much bleaker region, is found the considerable town of Yeniseisk, the capital of the government of the same name. The land route by it to

western Siberia is circuitous; but its position upon the great river from which it derives its name, at a very short distance below the junction of the almost equal tributary of the Angara, renders it a great centre of the river intercourse of Siberia. A water communication with Tobolsk is formed by the Ket, which falls into the Obi. On this dreary tract is found Narym, a village with a church, and 100 houses, established solely to collect from these wide regions the tribute of furs.

The Yeniseï, after passing Yeniseisk, rolls for upwards of 1000 miles to the Northern Ocean, through a desert still more vast and dreary than that of the Lower Obi. Turukshansk, or Mangasea, is the name given to this awful world of desolation. It is occupied chiefly by the Tunguses, who, not in their persons, but in their habits and mode of subsistence, even in the construction of their winter and summer houses, considerably resemble the Esquimaux. Turukshansk, in the Russian archives called a city, is the smallest, perhaps that bears the name, not having more than 100 inhabitants, who mostly reside within a little wooden fort defended by four guns. The trade and tribute of furs are the only source of subsistence. Its situation at the junction of the great tributary of the Lower Toungouska is favourable for this purpose. The vicinity is dreary, but enlivened by numberless flights of waterfowl.

From Yeniseisk and Krasnoyarsk, population and commerce take a southern direction, and centre themselves at Irkoutsk. The position of this capital altogether fits it to be the emporium of Eastern Siberia. The Angara enables it to communicate on one side with the western rivers, on the other with the Baïkal Sea, and that point of the Chinese frontier which is the scene of the most active land commerce of Russia. The Lena, again, which takes its rise not far distant, connects it with the Eastern Ocean, and with immense tracts, which, though destitute of all the necessaries and even comforts of life, abound in the most precious furs. Its prosperity and growth have, therefore, been rapid; and, from being a secondary city, dependent upon Tobolsk, it has been raised to be the seat of a government which comprehends all the eastern tracts now to be described. Travellers generally describe Irkoutsk as now the handsomest in external appearance, and the most elegant as to society, of any in Siberia. The houses, indeed, are chiefly of wood; but the streets are broad and spacious; some of the public buildings are very fine, and there are twelve handsome churches. The population, by the last census, consisted of 11,292, and has probably increased since. The principal inhabitants consist of merchants, chiefly connected with houses in St. Petersburg, and of the civil and military officers of government. Captain Cochrane laments, as the main bar to social enjoyment, the jealousy which reigns between these two parties: yet of such local and precarious application are those remarks, that Mr. Holman, his contemporary, considers the agreement between those very classes to be a subject of agreeable surprise. Both being in the habit of passing to Europe, have introduced whatever is most recent in its literature, as well as in musical and dramatic performance. A small library has been formed, as well as a collection of natural history; and government, among other seminaries, has founded a school for the instruction of the Japanese. The shops of Irkoutsk are filled with nankeens, porcelain, lacquered ware, and other articles of Chinese dress and furniture, and it has almost the aspect of a Chinese city.

Ascending the Angara from Irkoutsk, we enter the wide inland sea of the Baïkal, which, as one of the grand features of Asiatic Russia, has been already described. Beyond it to the south, a scene opens altogether Mongolian. The country presents the sandy plains of Eastern Tartary, intermixed, occasionally, with good pastures. The Mongols, with the cognate tribe of the Burats, fill all the country; and even the Russian colonists imitate their manners and language. The religion of the Lama is celebrated in all its pomp of sound and image; tea, formed as in Thibet into a pulpy mass, is the favourite beverage: all the habits and system of life are those of Middle Asia. Nertchinsk is the name given to this south-east corner of the Russian empire. The town of that name was once frequented as the main route to Kiakhta; but since the merchants have preferred to ascend the Selinga, Nertchinsk derives its importance solely from its mines of lead and silver, which are very abundant. Their annual produce is usually 40,000 lbs. of lead; from which are extracted 250 lbs. of silver. The mines, like others, are worked by exiled convicts, whose situation is peculiarly hopeless, as the Chinese never harbour them. Westward from these metalliferous chains stretch the Yablonoy mountains, the most rugged, and perhaps the loftiest part of the great chain which here crosses Asia. Thick and continued forests, rocks, steeps, morasses, and snow, cover all their higher pinnacles; these features render them impenetrable, unless to a few daring hunters, who make their way by paths scarcely distinguishable from the track of wild beasts. The prevailing form is that of a number of pyramids uniting in a broad summit resembling an apple; whence is derived the appellation Yablonoy.

In order to facilitate the route to Kiakhta up the Selinga, the Russians have built upon that river Oudinsk and Selinginsk, small towns, in a barren country, and merely supported by this transit. Kiakhta has been already mentioned as the busiest scene of the commerce of Northern Asia, having been fixed upon by the treaty of 1728, as the only point at which commerce can take place between the vast empires of Russia and China. It stands on a

naked, somewhat elevated plain, with lofty granite peaks rising round it on every side. It is closely contiguous to the town of Maimatchin, crowded with Chinese merchants, who resort thither for the purposes of this trade. The towns, however, are distinct; and each is surrounded by its separate fortification. Forts built on the pinnacle of two opposite mountains mark the boundary of the empire, being surmounted on the Russian side with a cross, on the Chinese side with a cone or pyramid. In consequence of the influx of strangers, the manners are said to be more polished and sociable than in other towns of Asiatic Russia, and the two nations mingle cordially in social intercourse. The Russians are even invited to the place, and entertained there; though, on the tolling of a bell at sunset, they must all hastily quit it. The European residents, in imitation of the Chinese, drink vast quantities of tea, and even annoy visiters by pressing upon them a beverage not generally the most agreeable to the Russian palate.

From Irkoutsk, a north-east route of 600 miles leads to Kirensk, situated on the Lena, where it first begins to be a river of importance, and in a position equally convenient to travellers from Irkoutsk and from the Yeniseï. The last traces of rich vegetation are here produced by a fertile soil, even amid the severity of the climate. It is also well situated for the trade in furs; and its sturgeon is reckoned the best in Siberia. With all these advantages it is no more than a village of about 100 houses.

Entering the province of Yakutsk, we come to Istkut and Olekminsk, situated on the Lena, as it descends into the frozen regions, which are merely small posts formed for the collection of furs, and for stages on the road to Yakutsk. Yakutsk, in the heart of this frozen territory, has still pretensions to the name of a city, since its ill-built wooden houses contain about 7000 inhabitants. Nothing can be more bleak than its situation and environs. A few crops of rye are sown on a rich soil, but under a complete uncertainty whether they will ever ripen, in a climate where, in the end of June, the ground is still deeply frozen, and early in September the Lena is passable on sledges. Still, it is rendered a place of some importance by the rich furs which are either caught in the surrounding region, or brought from the opposite coast of America. The merchants make very high profits, both by the enormous price at which they sell tobacco, spirits, and other European commodities, and the low rate at which they obtain those of the natives in exchange.

On the Lower Lena and Olensk, and within the borders of the Arctic Circle, the Russians have established Gigansk and Olensk, small posts for hunting and tribute. Near the mouths of these rivers, the Northern Ocean presents a number of isles, of which some are large. They have been carefully examined by the hunter Liackof, who discovered, even at the distance of about 200 miles from the shore, an extensive coast, to which some have given the name of New Siberia. The Russian government sent afterwards to examine it more carefully, but without being able to ascertain its extent and boundaries. Some even imagined them to extend in such a manner as to become connected with the continent of America; but this supposition is now abandoned. The aspect of these shores is, as might be expected, dreary and desolate; but they present one indication that is truly extraordinary, and gives much room for thought to those who speculate on the changes and destiny of the earth. There are found numerous bones and other remains of the elephant, an animal now altogether foreign to this part of the globe, or to any which is not separated from it by nearly a fourth of its circuit. Remains of that huge animal, of an extinct race, the mammoth, are also found at this extremity of Siberia.

Proceeding from Yakutsk eastward, we come to the district of Okotsk, which presents a more active and thriving scene. The traveller who ascends the Aldan and the Joudama, and after a short portage descends the Okota, reaches Okotsk, the emporium of the north-eastern seas of Asia. It is a neat, thriving, improving town, situated on a long narrow ridge between the sea and the river, and containing 1500 inhabitants. Nearly half of these are in the employ of government, which maintains them at an expense of 10,000*l.*; which sum, however, the revenues of the district do not pay. Okotsk collects all the furs and skins of Kamtchatka and of north-western America, which last branch has of late received a great augmentation.

A large and long peninsula, of peculiar character, called Kamtchatka, extends into the ocean which waters the eastern extremity of Asia. This territory is about 600 miles in length, by 300 in its greatest breadth. Its position on the globe ought to give to the greater part of it a climate like that of Britain; but the winds blowing from the plains of Siberia, and from the vast polar seas by which it is surrounded, induce an Arctic climate, and allow scarcely three months of summer. This cold is increased by the chain of mountains which traverses nearly its whole length, some of whose peaks rise, as already observed, to an extraordinary height. Attempts have in vain been made to rear, in Kamtchatka, the coarsest kinds of grain peculiar to the most northern climates.* There are, however, berries of various kinds, some roots, which, when dried, supply the place of bread; and a gramineous

* [Since 1830, oats, barley, rye, and even wheat have been cultivated with success in Kamtchatka; and potatoes, turnips, cabbages, beets, &c., have also been found to thrive.—Am. Ed.]

plant, from which they contrive to extract a spirit. But the main compensation is in the profusion of animal life, which fills alike earth, water, and air, and in which no territory on the globe seems to rival this. A sportsman who should be willing to sacrifice to his favourite amusement the pleasures of civilised life would find Kamtchatka a paradise. The land animals afford a valuable prize, being all covered with rich furs, and very abundant. Though not quite so fine as those of Siberia, they form the basis of a considerable trade. The coasts swarm with seals and other marine animals; the rocks are coated with shell-fish; the bays are almost choked with herrings, and the rivers with salmon. Flocks of grouse, woodcocks, wild geese, and ducks, darken the air. Thus the inhabitants obtain in abundance not only food, but full materials for that gluttonous indulgence to which they are addicted. They form a peculiar race (*figs.* 685. and 686.), with flat features, small eyes, thin lips, and scarcely any beard. Their stature is diminutive, with large head and short legs. Since the Russian sway put an end to the wars which they were wont to wage with considerable fury, they have passed into a peaceable, honest, lazy, drunken, servile race, careless of the future, and addicted to coarse sensuality. They have houses both for winter and summer (*fig.* 687.). The former, composed of branches of trees, plastered with clay, are half sunk in the ground; and in the interior one lamp, fed with train oil, lights, warms, and cooks the victuals of two families. The summer-house has a peculiar structure, its floor being raised by posts, twelve or thirteen feet from the ground, and leaving beneath an empty space, in which the fish is hung up to dry. In their domestic habits, the most remarkable peculiarity is the use of dogs harnessed to the sledges (*fig.* 688.), and employed to draw them. These dogs are of no peculiar size or strength, but resemble our mountain or shepherd dogs. They are fed on the offal of fish, and in summer are turned out to find their own food; their return being certain at the approach of the inclement season. In travelling, the driver yokes them two and two abreast, and from four to ten in one vehicle, according to the weight to be drawn. He then places himself in the sledge, which is in the form of a basket, with two ends turned up; but no ordinary skill is required to prevent both rider and carriage from being overturned on the rugged ground over which it is frequently dragged. At their high festivals, the Kamtchadales give themselves up to an almost frantic mirth, which astonishes those who have viewed the sluggishness of their ordinary deportment. Their favourite dance is one in which all the actions and motions of the bear are represented to the life; and the violent and uncouth attitudes assumed for this purpose excite in the spectators rapturous admiration.

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Man of Kamtchatka.

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Woman of Kamtchatka.

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Summer and Winter Habitations at Kamtchatka.

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Sledge and Dogs.

Although the Kamtchadales, by connection with Russia, have gained an exemption from war, they have suffered deeply from the introduction of ardent spirits and of various contagious diseases. Their numbers have thus been diminished, and do not at present exceed 4600, of whom little more than half are natives; the rest Russians and Koriaks. Bolcheretzk and Nischnei-Kamtchatka, are small villages, which pass for towns; but the only place of any real importance is Petropaulowsk, or the harbour of St. Peter and St. Paul, a thriving little port, by which the merchants of Okotsk carry on almost all the trade of Kamtchatka.

An Archipelago of small islands, called the Kuriles, stretch from the southern point of Kamtchatka to Jesso, a line of nearly 800 miles. Twenty-two are known, of which nineteen are subject to Russia. Some are uninhabited, from the want of water; others rival Kamtchatka in the abundance of game and fish. The inhabitants are peaceable and well disposed; they live nearly as the Kamtchadales, but in a neater and more civilised manner;

and some of the southern islands have imbibed a tincture of Japanese habits. Their subjection to Russia consists almost wholly in paying a tribute of furs and sea-calves.

A wild and remote country yet remains, in the extremity of Asia, into which only a few daring adventurers attempt to penetrate. All the features of Siberia are on an extensive scale; but scarcely any rival the immensity of its eastern deserts. Those who set out from Yakutsk for the peninsula of the Tchutchi have to traverse nearly 2000 miles, in which there is only, at each interval of 200 or 300 miles, a post of eight or ten huts. On the intermediate spaces are placed, for the accommodation of travellers, yourts, or little square wooden huts, at the precise distance of twenty-five miles from each other, with a fire-place in the middle, for which the pine-woods always supply plenty of fuel. At length they reach Nischnei-Kolymsk, on a bay of the Arctic Ocean, at the mouth of the Kolima. This town, as it is here called, consists of fifty wooden houses, and about 400 inhabitants. The soil yields neither grain nor herbage; but a few horses and cows are kept half alive by cropping the tops of the bushes. In return, the waters yield food in boundless profusion.

The gulfs of the Kolima and Anadir, belonging to the opposite oceans, enclose the extreme peninsula of the *Tchutchi* (*fig.* 689.).

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Tchutchi.

This race, in their rude retreat, have preserved entire the independence so long lost by all the other nations of Siberia. They meet the Russians, however, for purposes of traffic, at the fair of Ostronaya, which, when visited by Captain Cochrane, was the resort of about 200 Tchutchi of both sexes and of all ages, and 500 reindeer. They are a stout, rough, honest, bold, and fearless race. Dear-bought experience has rendered them excessively jealous of the Russian traders, and by no means so easily cheated as formerly. They take off about 40,000 pounds of tobacco, averaging three rubles a pound, with various little articles of hardware, cutlery, and toys; in return for which, they give sea-horse teeth, various skins and furs of sea and land animals, the produce of their own coast, of the neighbouring islands, and of the opposite coast of America.

CHAPTER XIII.

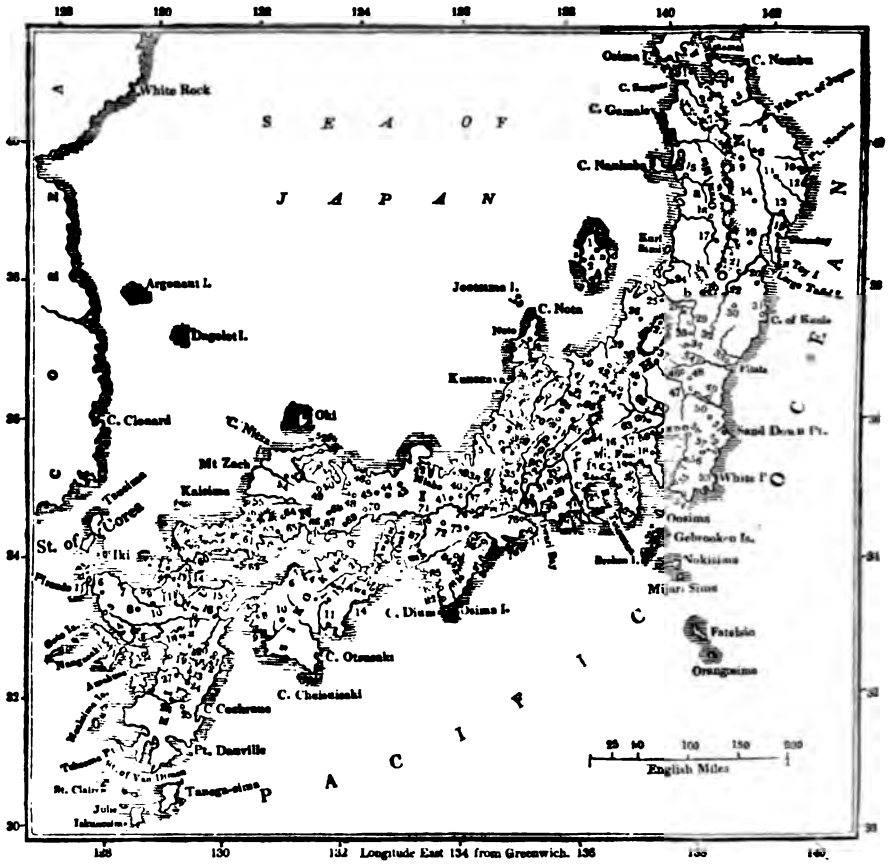
JAPAN.

Japan bears an affinity to China, in the nature of its institutions, the character of its inhabitants, and the physical and moral circumstances which separate it from the rest of the world. Asia, in general, forms a vast continent of broad and unbroken dimensions; but to the east and south-east, it presents archipelagoes of islands, so large as to constitute entire kingdoms. The three which constitute Japan have, not without plausible grounds, claimed the title of empire. The empire of Japan is in fact so great, so populous, and marked by such striking and peculiar features, that, notwithstanding the complete state of insulation in which it holds itself from other nations, it justly attracts a large share of the curiosity of Europe.

Sect. I.—*General Outline and Aspect.*

Japan consists of three principal islands, one very large, and two smaller, which, being separated from each other only by narrow channels, form altogether one long, winding, irregular range of territory. The entire length, in an oblique line, from point to point, scarcely falls short of 1000 miles; while the breadth, in some places not more than forty or fifty, seldom exceeds 100, and never, unless in its most expanded central point, amounts to 200. Niphon, by much the largest, is about 800 miles long; Kiusiu, or Ximo, 150 miles long by 120 broad; Sikokf, or Sicoco, 90 long, by 50 broad. The other islands are mere detached and local objects. The southern part of the large contiguous island of Jesso, comprehending all of it that is valuable and improvable, is completely colonised and possessed by the Japanese.

The stormy seas which dash around Japan form the most prominent feature in its geographical position. To the east it faces the entire breadth of the Northern Pacific; which, with the intervention of scarcely a single island, reaches fifty degrees across to the coast of America. The south-western point of the range comes almost in contact with Corea, from which it is separated only by a strait of about eighty miles. Proceeding to the north-east, it recedes continually from Asia, till it leaves an expanse, nearly 700 miles broad, called the Sea of Japan. At the northern extremity this sea is narrowed by the large islands of Jesso and Saghalien, till it is formed into a species of close bay.



References to the Map of Japan.

ISLAND OF NIPHON.

NORTH PART.

1. Firnjaki
2. Sugaru
3. Mimaja
4. Sedaki
5. Ooda
6. Aidat
7. Yamasawa
8. Kimbasa
9. Azu
10. Nabo
11. Kadsioda
12. Sibatta
13. Aizu
14. Jumadsukuri
15. Kubota
16. Shidaybama
17. Ottama
18. Minaka
19. Shanday
20. Madrusara
21. Oonato
22. Fasikani
23. Magami
24. Nigata
25. Kof
26. Kabigi
27. Ivafune
28. Ascara
29. Sanada
30. Asoonusa
31. Gunki
32. Namingata
33. Fitatz
34. Kusai
35. Tsuga
36. Kura
37. Aso
38. Ofara
39. Cambara
40. Tonomi
41. Fotas
42. Inaidsu
43. Ussui
44. Seetta
45. Gumma
46. Fyki
47. Gisma
48. Jenjoko
49. Seida
50. Okanda
51. Toiko
52. Amafa
53. Nacaba
54. Awa
55. Fecuri
56. Musse
57. Mooki
58. Tsibba
59. Jeddo
60. Jebaza
61. Canaca
62. Irkomi
63. Arecusa
64. Jamanassir
65. Fannisinia
66. Mitzuz
67. Mebu
68. Tkenda
69. Niba
70. Oona
71. Nomi
72. Nacava
73. Oyama
74. Shiyo
75. Noto
76. Jenne
77. Kanazava.

SOUTH PART.

1. Kilanesio
2. Tsikavoa
3. Micala
4. Cammo
5. Onibu
6. Jekismokori
7. Anzuquiama
8. Mottoe
9. Kakuri
10. Guise
11. Futa
12. Tsisagatta
13. Jana
14. Tsikumma
15. Udo
16. Tsabe
17. Juringi
18. Kanagava
19. Totska
20. Kowara
21. Odowara
22. Bandel
23. Farra
24. Icej
25. Kakgava
26. Midzke
27. Famumatz
28. Sosida
29. Okasoki
30. Twati
31. Amabe
32. Nirva
33. Owari Nagaja
34. Izo
35. Komuno
36. Sigga
37. Otiz
38. Tokis
39. Tbarunga
40. Nara
41. Meaco
42. Kaki
43. Kuwadi
44. Totteri
45. Ooha
46. Kumano
47. Aneri
48. Eudsit
49. Inaka
50. Oofara
51. Semani
52. Jodsumo
53. Kanto
54. Akisika
55. Onsi
56. Oosima
57. Missima
58. Missima
59. Amu
60. Amaguchi
61. Muko
62. Moriza
63. Camiro
64. Takamidja
65. Oaminagari
66. Mitarei
67. Tomu
68. Kinosjurao
69. Minoje
70. Ako
71. Osaka
72. Kawatsa
73. Aiska
74. Kutats
75. Tokaitz
76. Iga
77. Toriba
78. Niaiki
79. Ponga
80. Namanda
81. Toosi
82. Samaria
83. Kuno
84. Foguri
85. Wakajamma
86. Giamura
87. Idsumi.

Rivers.

a Zubaki
b Nigata
c Tenrin.

SIKOKF ISLE.

1. Awa
2. Kanda
3. Taka
4. Fuke
5. Imabari
6. Kurisima
7. Matsjamma
8. Kuno
9. Siwabo
10. Tosa
11. Ojea
12. Nungasima
13. Misa
14. Simaguiso.

KIUSIU ISLE.

1. Nangasaki
2. Simabara
3. Isafaca
4. Qumuza
5. Osnokubi
6. Awo
7. Naraja
8. Tikwa
9. Tacata
10. Kasaaki
11. Fevda
12. Noorma
13. Moos
14. Nazacari
15. Vokinofama
16. Fusai
17. Votoki
18. Takino
19. Mike
20. Succumi
21. Oakata
22. Koioja
23. Azula
24. Jamaga
25. Koos
26. Keki
27. Jamas.

SADO ISLE.

1. Sosta
2. Umo
3. Kama.

The aspect of Japan is bold, varied, abrupt, and striking (*fig.* 691.), without any single feature that is very prominent. Rugged chains traverse its interior, from several of which volcanic fire is thrown up; and Fusi, the highest, is covered with almost perpetual snow. On the whole, however, these inequalities of surface are no more than necessary to supply the moisture requisite in so hot a climate; and an ample proportion of the surface of Japan consists of rich valleys and extended plains, on which all the articles of tropical produce grow in the utmost abundance. Streams, pouring down from the interior heights, traverse the plains in endless numbers, and in every direction; but, in this narrow belt, the receptacle of the sea is everywhere too near to allow them to acquire the character of great rivers. There are no lakes of any magnitude; but the coast is indented with many deep and broad bays, which penetrate the interior, and afford the most important aid to internal commerce. .

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Japanese Scenery.

Sect. II.—*Natural Geography*

Subsect. 1.—*Geology.*

These islands contain several volcanoes of considerable extent, concerning which some few details have been published by travellers; but the geognostical relations of the other formations of the group are not known to us.

The precious metals, gold and silver, abound in the empire of Japan. The gold is obtained principally from a pyritical ore of copper; smaller quantities are collected from alluvial soils of various descriptions. Rich mines of silver are said to occur in the province of Bungo, and the most northerly parts near Kattami. There are considerable copper mines in different district. Iron is said to occur but seldom, or it is less extensively mined than copper, as the natives do not make so much use of it as most other nations. They sometimes employ it in the manufacture of arms, knives, scissors, and other necessary implements. The gold and copper are coined into money. Cinnabar, the ore of mercury, is also met with in Japan. Sulphur is found in great abundance; coal occurs in some of the northern provinces; beautiful kinds of amber were received by Thunberg from the natives; and a reddish brown naphtha is used for burning. Asbestos, porcelain earth, tourmaline, schorl, and marble are also enumerated among the mineral productions of Japan.

Subsect. 2.—*Botany.*

Japan,* like China, is under the influence of an Oriental clime: its temperature is much lower than that of Morocco, Madeira, and the peninsula of Spain, which lie under the same parallels. The islands of Kiusiu and Sikokf, and the southern part of Niphon, terminate, eastward, the Transition Zone. These islands are intersected by mountains, some of them of considerable height. The summers are very hot; but the thermometer sinks a great deal in winter. From observations made by Thunberg in 1775, at Nangasaki, lat. 32° 45′, it appears that the mean annual temperature is but + 16° Réaumur; owing to which the Bananas, grown in the vicinity, do not bear fruit. In August the greatest heats take place, when the thermometer rises to + 36° or 37°, sometimes to + 43°. The winter begins in January and closes in February, during which the quicksilver varies between + 21° and — 2°. Occasionally snow whitens the ground, and the surface of the water is covered with ice. The island of Niphon is traversed by the northern limit of the Transition Zone. It is needless to attempt to determine precisely the line of this zone: the temperature of Niphon is unknown to us; and as to its vegetation, our only information is derived from Thunberg, who travelled in 1776 from Nangasaki to Jeddo, under the surveillance of an escort which did not permit him to deviate from the road. At Osaka (lat. 34° 5′) there is a botanic garden, containing many of the productions of the empire; and where Dracæna revoluta, Laurus Camphora, and other species which require a mild temperature, grow in the open air. The Tea plant, which, with the Camellia and Lycium barbarum, forms all the hedges in Kiusiu, grows also on the slopes of the mountains between Meaco and Jeddo; but the Tea appears to be of the number of those plants which a considerable degree of heat in summer protects against the effect of winter. It is probable that the mean temperature of Jeddo is much lower than that of Osaka and Nangasaki.

The trees on the mountains of Niphon consist generally of northern species; such as the Lime Tree, the Scotch Fir, the Pinus Cembra and P. Strobus, the Spruce and Larch. To

* From Mémoires du Mus. d'Hist. Nat. vol. xiv. p. 442.

the north of Niphon, in the island of Jesso, at Matsmai, lat. 42° (only 7′ north of Rome), the winter is long and severe; the thermometer falls to — 18° or — 19°; and a thick bed of snow covers the ground from November to April.

Thunberg has made us acquainted with 755 Japanese flowering plants; most of them collected in the environs of Nangasaki and some adjacent islands. This specimen of the vegetable productions of the country suffices to give an idea of its general character. It may be called an Insular Flora; and of Japan, as of many other islands, it appears probable that the vegetable population was originally very small, and has gradually increased by colonisation.

Among these 755 flowering plants, we may observe 240 of the old continent; some from India, as Salix japonica, Eleagnus umbellata, and the Orange tree; also the Citrus Decumana and Paper Mulberry, the Camphor tree, and Bamboo, the Pride of India, &c.; some Chinese species, as Podocarpus macrophylla, Cupressus patula, Thuja orientalis, Ficus pumila, Quercus dentata, Bladhia japonica, Olea fragrans (*fig.* 692.), Sophora japonica, Ailanthus glandulosa, the Sasanqua and Camellia, the Anise tree (*Illicium anisatum*), the Hydrangea (*fig.* 693.), Cycas revoluta, Raphis flabelliformis, &c.: others belong to the western portion of the Transition Zone, as the White and Black Mulberry, the Oleander,

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Olea Fragrans.

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Hydrangea.

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Salisburia Adiantoides.

the Pomegranate, Zizyphus vulgaris, Tamarix gallica, Ilex aquifolium, Cercis Siliquastrum, some species of Prunus, Pyrus, Amygdalus, Ficus, &c.; some again, which are common to all the northern parts of Europe and Asia, as the Yew, the Juniper, the Scotch Fir and Larch, the Spruce and Pinus Cembra, the Chestnut, Birch, Alder, Ash, Elder, and White Willow. There are, likewise, about 30 North American kinds; among which are Rhododendron maximum, Sambucus canadensis, Bignonia Catalpa, Magnolia glauca, Æsculus Pavia, Pinus Strobus, Juniperus bermudiana and barbadensis, Juglans nigra, Amorpha fruticosa, Vitis Labrusca, &c. To a botanist, the combination must be very interesting of these various types, belonging to the vegetation of such distant lands, here growing on the same soil. In the more southern part of Japan, the plants of warmer districts are not unfrequent; as the Camelliaceæ, Ternströmiceæ, Sapindaceæ, Magnoliaceæ, Bignoniaceæ, Ardisiaceæ, Gardeniæ, Begoniæ, Amoma, Epidendra, and Commelinæ; one Palm and one of the Cycadeæ, &c.; but, in general, the prevailing generic types are those of the other parts of the Transition Zone in the old continent.

The most remarkable shrubs and trees hitherto seen in Japan are, Salix integra, Betula japonica; Quercus glabra, glauca, acuta, cuspidata, and serrata; Cupressus japonica, Thuja dolabrata, Salisburia adiantifolia, Podocarpus Nageia, Taxus nucifera and verticillata, Celtis orientalis, four or five Eleagni, four Laurels, Osyris japonica, Nerium divaricatum, Diospyros Kaki, Syringa suspensa, Callicarpa japonica, Volkameria japonica, Vitex rotunda, Clerodendrum dichotomum, Paullinia japonica, Magnolia obovata and Kobus, Citrus japonica, six species of Acer, three of Vitis, six of Ilex, several of Prunus and Cratægus, &c.

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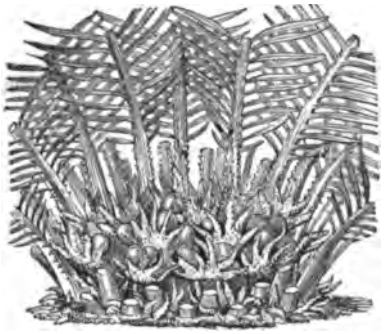

Cycas Revoluta.

To Japan, as well as China, the gardens of this country are indebted for some of their choicest, though not most numerous, treasures; of which several are quite hardy, as the Hydrangea hortensis, Pyrus (*Cydonia*) japonica and Mespilus (*Eriobotrya*) japonica, the Anise tree (*Illicium anisatum*), and that favourite evergreen, Aucuba japonica, the Salisburia adiantoides (*fig.* 694.) and Sophora japonica; while the deliciously scented Olea fragrans, and the useful Cycas revoluta (*fig.* 695.) require the protection of our greenhouses.

Subsect. 3.—*Zoology.*

Our zoological information of this remote and little known empire remains nearly as imperfect now as it was fifty years ago, when the celebrated botanist Thunberg visited Japan. It seems that neither sheep nor goats are esteemed by these curious people; very few swine are seen, and the only use made of the cattle is to draw the ploughs. If the population is as great as travellers represent, the wild quadrupeds must long ago have been diminished, or nearly extirpated.

A few Birds of unusual splendour, or of singular structure, appear peculiar to this part of Asia. The Japan peacock is a totally distinct species from that of India, although about the same size. For a long time this superb creature was only known to naturalists by a painting sent to the Pope, and even its existence began to be doubted, until the celebrated Le Vaillant, by great good fortune, met with a living specimen in a menagerie at the Cape of Good Hope, and thus established the truth of its actual existence.

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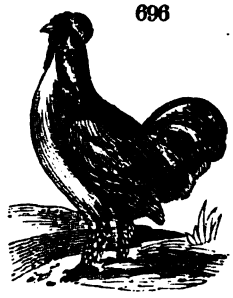

Silk Cock.

Among the Domestic Fowls of Japan are two most singular races, said also to be inhabitants of the native forests. One is the Crisped Cock (G. crispus Tem.), having the whole of the feathers curled up in such a manner as to appear, at a little distance, like wool; its colour is usually white. The other is the Silk Cock (*fig.* 696.) (Gallus lanatus), and presents an equally strange deviation from the usual course of nature; the webs of the feathers being so entirely disunited that the bird appears covered only with silky hairs; this also is white: the flesh is considered so delicate as to exceed that of the best ordinary capon.

Sect. III.—*Historical Geography.*

Japan was entirely unknown to the ancients, and is not mentioned by any of their historians. The empire, however, has records, which affect to detail its revolutions for a period long anterior to that which we are justified in assigning to the origin of human society. Of the seven celestial spirits, who ruled it for more than 1,000,000 years, nothing need be said. The second dynasty, though it commenced 15,000 years before the creation, includes, probably, a considerable admixture of truth. The emperors were mere human beings, and they are represented, according to the probable course of things, as having come from China, and introduced, among a yet barbarous people, the useful arts, medicine, and a tincture of the sciences. The third period, which may be considered as fundamentally genuine, is referred to the sixth century before the Christian era. It was marked by the accession of the dairis, who laid claim, not, indeed, to divine attributes, but to a descent from the early celestial rulers; and they, as "sons of heaven," and ministers of the Deity, continued to exercise over Japan a mingled civil and ecclesiastical sway. It appears probable, however, that their power over the greater part was little more than spiritual; and that its varied districts were held by civil princes in almost independent possession. The dairis, as they sunk into voluptuous indolence, devolved into the hands of the cubo, or general, that military power which can with such difficulty be prevented from becoming paramount. This, in the course of the sixteenth century, gave rise to a complete revolution in the political situation of Japan. A succession of brave and able cubos found means to reduce all the petty princes under subjection to the general government, and at the same time to monopolise the supreme direction of affairs. The profound veneration, however, entertained by the nation for the dairi, and the sacred character with which they supposed him to be invested, rendered it impossible that he should be wholly superseded. He still enjoyed ample revenues to maintain his dignity, with an absolute control over all spiritual concerns, leaving the solid and temporal power to the cubo, who has ever since maintained it without interruption on the part of the dairi, and, by a course of severe and determined measures, has held all the formerly independent princes in a state of complete vassalage.

The intercourse of Europeans with Japan is to us the most interesting part of its history, though it has scarcely affected the destinies of the empire itself. The Portuguese, who were the first explorers of this as well as of every other part of the Asiatic coast, did not at first encounter that deadly jealousy with which Japan was afterwards closed against Europeans. Not only were they allowed to establish a factory, and carry on a great trade at Firando, but no opposition was made to the introduction of missionaries, for diffusing the Catholic religion. St. Francis Xavier, the celebrated apostle of the East, made Japan the great theatre of his preaching. After some obstacles, considerable progress was made; several of the princes or tributary kings, with a considerable proportion of their subjects, embraced the new faith; and an embassy was even sent to Philip II. and the pope. In no long time, however, these fair promises began to be clouded. The nobles became impatient of the restraints imposed by their new profession; and the perpetual jealousy of a despotic

government was kindled by the introduction of new doctrines, habits, and ideas, from a foreign nation, who might employ this change as a prelude to conquest. Some rash steps taken by the missionaries, and, probably, the report of Portuguese proceedings in other parts of Asia, raised this hostile disposition to the utmost pitch. A general persecution was commenced against all, both native and foreign, who held the new faith; and it was carried on with an unrelenting severity characteristic of the nation. The series of studied torture employed was not, perhaps, surpassed by that which the Roman emperors inflicted on the early converts. The Japanese Christians suffered long, with a constancy peculiar to themselves; but at length, having to do with a government which knew not pity, they were either exterminated or overawed. The Portuguese, at the same time, were put to death or expelled. That nation, in 1640, made a last attempt, by sending an embassy of seventy-nine individuals, to open a new commercial intercourse. But these, by orders from the Japanese court, were all put to death, with the exception of thirteen, whom the magistrates sent back with the following mandate:—"You are to inform your fellow-citizens, that henceforth the citizens of Japan will not receive either money, merchandise, or presents from them; you see that we have burnt the very clothes of your dead countrymen. Let your people use in the same manner any of ours who may fall into their hands; we make them welcome, and desire they will think no more of the Japanese than if there were not such a nation in the world." And on a chest containing the dead bodies was written:—"Henceforward, so long as the sun shall shine upon the earth, let not any Christian be so daring as to set his foot in Japan."

The Dutch were too fully possessed with the spirit of commercial enterprise to be checked by these deadly warnings. Assuming the most submissive deportment, and, as has been alleged, denying the faith on account of which their predecessors had been expelled, they succeeded in establishing a factory at Firando. This being soon considered too wide a field, they were removed to the smaller spot of Nangasaki, where they have ever since been allowed to remain under restrictions progressively severe. They have at length been circumscribed as in a prison; allowed, indeed, to carry on a certain portion of trade, but without ever passing the allotted boundaries. All attempts made by other European states have completely failed. The most persevering have been those of Russia, which, after the possession of Kamtchatka and the Kuriles, became the immediate neighbour of Japan. Russia was exceedingly desirous of opening this intercourse, and even established a school at Irkoutsk, for the education of Japanese youth. In 1804, Captain Krusenstern sailed to Nangasaki on an official mission. Although a Dutch vessel was just sailing for Batavia, the two nations were not allowed to speak to, or even look at, each other. The Russians were well supplied with provisions and repairs, but were allowed to land only after a long interval, and then upon a narrow neck of ground, where they were watched as closely as they would have been in the Seven Towers at Constantinople (*fig.* 697.). After being detained for many months, and their solicitations for permission to proceed to court evaded under various pretexts, a deputation came down from the capital, announcing the irrevocable decision, that no Russian vessel could be allowed to enter Japan. Some years afterwards, a Japanese vessel having been saved from shipwreck on the coast of Asiatic Russia, hopes were entertained that this circumstance might open the way to friendly communication. With this view, Captain Golownin was sent to Matsmai, the Japanese capital of Jesso. If he was invited on shore, however, it was only to be thrown into close and rigorous durance, in which he was detained for many months. Orders were then sent to liberate him; but, as might be expected from such a prelude, they were unaccompanied with the slightest concession in favour of Russian commerce or intercourse. Golownin learned, during his confinement, that the utmost jealousy was felt at the court of Jeddo respecting the progress, both of Russia by land through northern Asia, and of the English by sea along the southern coast. Impressed with an extravagant estimate of their own importance, the Japanese imagined that the ultimate object of both these movements was to reach and finally conquer their empire.

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Ambassador's House at Nangasaki.

SECT. IV.—*Political Geography.*

The division of power between the ecclesiastical and the military potentate is the most remarkable peculiarity in the government of Japan: the one holds the highest rank, and the first place in the veneration of the whole nation; the other absorbs all the solid realities of power. In this relative position they have remained for several centuries, wishing, but not venturing, the one to recover the lost reins of sovereignty, the other to dispel the phantom which holds dominion over the minds of the people.

The dairi, who resides at Meaco, appropriates the whole revenue of that city and its rich adjoining territory. In order, also, that he may maintain the full pomp of a sovereign, a liberal allowance is held due to him out of the general revenue. This, however, is all in the hands of the cubo, who often finds it inconvenient to make the payment, and has recourse to apologies which, whether satisfactory or not, the other has no means of disallowing. Thus, a proud poverty reigns in this sacred court, which is greatly increased by the circumstance, that all the members of the blood royal, sprung from the early divine rulers of Japan, now amounting to many thousands, must be so maintained as not to bring contempt upon the race. A considerable number find employment in religious functions, and in the numerous monasteries; but others are reduced to great straits, and the descendants of the celestial spirits are obliged to support their outward dignity by privily manufacturing straw hats, horse-shoes, and other humble handicraft productions. Every nerve, however, is strained that all around the dairi himself may present the most imposing aspect of magnificence. Fantastic attributes are ascribed to him, which may appear to raise him above every tincture of mortal imperfection. His foot is never to be profaned by touching the ground, and he is never to be moved from one place to another, unless upon men's shoulders. It is considered unlawful for him to cut off his hair, nails, or any thing which can be held as forming part of his person; but the extreme inconvenience of this rule has led to the somewhat poor evasion of taking them from him during sleep. On his death the next heir succeeds, whether male or female, at whatever age. Yet the strictness of this hereditary principle did not prevent disputed succession, while the sovereign power centred in the dairi; but, in his present humbled state, the courtiers are studious to adjust all discussions in a quiet manner, in order to prevent any external interference.

The cubo, or temporal sovereign of Japan, rules with an authority which admits, in principle, of no limitation. In fact, however, it stands on a very different footing from that of the despotic monarchies of Asia. The provinces are ruled, not by satraps appointed and removeable at pleasure, but by princes, once warlike and independent, and only reduced, after a hard struggle, to bend to the will of a conqueror. They thus form a sort of feudal aristocracy, residing in large and strongly fortified castles; but have no right to meet in council, nor any legal control over the actions of the monarch. They retain, however, lofty sentiments of independence, to guard against which, the most rigorous precautions are taken. They are obliged to leave the greater part of their family at court as hostages, and themselves to reside there for a great part of the year. When discovered or believed to be engaged in any measure hostile to the government, death is the immediate and irrevocable sentence; and the only mitigation granted is that of being allowed to procure it by their own hands.

The laws of Japan, in general, may be said, even more emphatically than those of Draco, to be written in blood. They seem to struggle against a spirit in the nation hostile to the despotic principle, and which is made to bend to it only by the most powerful impulse of terror. Cutting in pieces, piercing the belly with a knife, immersion in boiling oil, are common modes of punishing the guilty. The parent suffers for the crime of the child, and the child for that of the parent. A remnant of republican constitution is preserved in the division of cities into wards, to which the maintenance of the police is intrusted, but under the penalty that each ward must be responsible for the crime committed by any of its members. Of these violent measures, however, the result really is, that the security of person and property is very complete, and that capital punishments are even rendered more rare than in most other nations. Around Nangasaki only, examples of this unrelenting severity continue more frequent, in order to extirpate every remnant of Christianity, and also to punish the instances of contraband traffic which private interest prompts, in the face of the most rigorous prohibitions.

Sect. V.—*Productive Industry.*

The Japanese rank with the richest and most industrious nations of Asia, though they confine themselves so entirely to their internal resources. In particular, their fertile soil, and even those parts of it to which nature has been least bountiful, are improved with the most exemplary diligence. Thunberg, in travelling through tracts the site of which was most favourable for the production of rare and curious plants, flattered himself with ample means of indulging his taste for botany; but his hopes were completely baffled by the laudable exertions of the Japanese farmers, who, classing all such productions in the rank of weeds, had waged a successful war of extermination against them. The basis of their culture is Chinese; and they resemble that people in the extreme care with which manure is collected. The husbandmen must, indeed, be hardly treated, if, according to Kæmpfer's statement, they are obliged to pay to the landlord six parts out of ten. Rice is the pride of Japanese agriculture, and the main staff of life. That which is raised on the best soil is said to be finer, whiter, and more easily preserved, than any other in Asia. Next in utility ranks the daid-su, a species of large bean, which, being made into a pulp, serves like butter

as a condiment to season many of their dishes. Wheat and barley are also standard grains, though not to an equal extent. Turnips are the culinary product which serves most for the support of the people. Of trees, the mulberry is considered the most valuable, and affords the material of the staple manufacture, though none of it is equal in quality to the finest produced in China. Tea, being in as universal demand as in that country, is cultivated all over Japan, but with care that it do not encroach on any more essential product; for which reason it is planted only in hedges, or in spots unfit for the spade or plough. One of the most valuable trees is the arusi, from which distils the precious varnish employed by the Japanese in the rich lackered ware peculiar to the country. The fig and chestnut are their principal fruits. Fir and cypress furnish the timber chiefly employed for ships; but the bamboo, for the beauty of its growth, and the various forms into which it can be manufactured, is the wood most prized by the Japanese.

Quadrupeds, both wild and tame, are the property with which this empire least abounds. The wild animals, in a country where every spot of ground must be turned to account, are studiously extirpated; and room is found for the tame only in so far as they may be necessary instruments in cultivating the ground. Even this is performed much more than in Europe by mere manual labour. Oxen, and a large species of buffalo, with a hunch on the back, are chiefly used for carriage and ploughing. Horses, usually of a small size and not very numerous, serve for state and travelling. There are neither asses, mules, camels, nor elephants. Only a few hogs have been brought over from China; and the very few sheep and goats introduced by the Portuguese at Firando have never multiplied. The economical habits of the Japanese combine with their religious principles in interdicting the use of animal food; and milk, cheese, and butter form no part of their diet. Dogs, by imperial favour, have been allowed to multiply till they have become almost a nuisance, though they are little used in hunting.

Fishery forms a very extensive source of Japanese subsistence. Besides the species known in India, they have whales which come down in large numbers from the Polar seas, and are caught, as in Greenland, with the harpoon. They are highly prized, less for the oil than as articles of food: every part,—the flesh, the skin, the intestines, even the cartilage of the bones,—is boiled, roasted, fried, and eaten. The rocky coasts which surround Japan are covered with tortoises, crabs, oysters, and shell-fish of all descriptions, which are eagerly collected for food.

Minerals, however, form the peculiar wealth of Japan. Gold is found in a quantity amply sufficient, at least, for internal supply; though some of the rumours respecting its abundance appear to be fabulous. The mines having, of late, shown some marks of exhaustion, it has become the policy of the emperors to economise them, and to prevent the export of gold. Silver is considered to be rather scarcer. But copper is the metal which Japan produces most plentifully, and of a quality finer, more malleable, and fitter for use than any other in the world. A considerable quantity of gold is often combined with it. Though iron ore abounds in one part of the empire, it is not generally diffused, and is, on the whole, both scarcer and dearer than copper. This last named metal, therefore, is usually employed in household vessels, the fitting up of ships, and other works elsewhere made of iron. Pearls and amber are found in considerable quantities on the shores. Submarine plants, corals, corallines, mushrooms, sea fans, occur in singular beauty and variety, but are little valued by the natives.

The manufacturing industry of the Japanese, though not so remarkable as that which they display in agricultural pursuits, is still considerable. It is exerted on the same branches, and after the same models, as with the Chinese,—silk, cotton, porcelain; but none of them is carried to equal perfection. There is one process, however, that of covering their vessels with a rich dark varnish, and raising above it artificial flowers and ornaments, which derives its name from Japan, and in which that nation excels all others. They are well acquainted with the art of working metals, and particularly the fabrication of arms; and also with the making of glass.

Perhaps no nation so large and so rich is so great a stranger to foreign trade. The Chinese, though so much limited as to intercourse with strangers, have yet huge junks, which sail through all the Oriental islands; but nowhere is a Japanese flag ever seen. Their vessels, little better than boats, and of a clumsy construction, are unable, notwithstanding the use of the compass, to do more than creep along their own coast. The Chinese and Coreans are allowed to visit the port of Nangasaki, and to exchange raw silk and some of the finer manufactures, for metals and lackered ware. The Dutch have only a corner of the port of Nangasaki, where, enclosed in a sort of prison, and subject to every humiliation, they are allowed to dispose of two annual cargoes. They import various articles of colonial produce, spices, and hardware, in return, chiefly, for the unrivalled copper which this country produces, with some lackered ware and other trifling articles. As they make, however, a profit of 20,000*l.* a year, they continue, notwithstanding some menaces, to brave all the mortifications, and even dangers, which attend this traffic. Commerce, thus confined almost entirely

to the interior of the empire, is very active within that sphere. All the shores and bays appear crowded with barks, conveying from place to place the various products of the provinces. The roads are excellent, and thronged in an amazing degree; they are kept clean by the mere anxiety of the people to collect the mud as manure. The broad and rapid torrents in the mountainous districts are crossed by handsome bridges of cedar, well fenced, and always kept in the most perfect repair.

Sect. VI.—*Civil and Social State.*

The population of Japan cannot be estimated on any precise data. Its superficial extent has been rated at about a tenth of that of China, and, according to all appearance, the population must be nearly as dense. If China, then, contain 200,000,000, Japan will have 20,000,000. Klaproth estimates the population at 30,000,000, and others carry the number as high as 50,000,000.

The Japanese seem, in personal appearance, to be a somewhat altered and improved variety of the Mongols and Chinese. Their eyes are even in a greater degree small, pointed, oblong, sunk in the head, with a deep furrow made by the eyelids; they have almost the appearance of being pink-eyed. Their heads are in general large, and their necks short; their hair is black, thick, and shining from the use of oil. They are, however, robust, well made, active, and easy in their motions. Their complexion, yellow and passing into brown, appears to be entirely produced by the climate; since ladies who are constantly protected from the heat of the sun are as white as in Europe.

The national character is strikingly marked, and strongly contrasted with that which generally prevails throughout Asia. The Japanese differ most especially from the Chinese, their nearest neighbours, notwithstanding the resemblance in form and lineaments. Instead of that tame, quiet, orderly, servile disposition, which makes them the prepared and ready subjects of despotism, the Japanese have a character marked by energy, independence, and a lofty sense of honour. Although they are said to make good subjects, even to the severe government under which they live, they yet retain an impatience of control, and a force of public opinion, which renders it impossible for any ruler wantonly to tyrannise over them. Instead of that mean, artful, and truckling disposition so general among Asiatics, their manners are distinguished by a manly frankness, and all their proceedings by honour and good faith. They are habitually kind and good-humoured, when nothing occurs to rouse their hostile passions, and they carry the ties of friendship even to a romantic height. To serve and defend a friend in every peril, and to meet torture and death rather than betray him, is considered as a duty from which nothing can dispense. Good sense is considered, by Thunberg, as a prominent feature; and it appears particularly in their dress, which they seek only to render substantial and suitable, despising those glittering ornaments which are so eagerly sought over all Asia. The greatest defect seems to be pride, which runs through all classes, rises to the highest pitch among the great, and leads them to display an extravagant pomp in their retinue and establishment, and to despise every thing in the nature of industry and mercantile employment. It has the still worse effect of giving rise, on any injury, real or supposed, to the deepest and most implacable resentment. This passion, which decorum and the rigour of the laws prevent from breaking into open violence, is brooded over in silence, till the opportunity of vengeance arrives. Forced often to bend beneath a stern and powerful government, they are impelled to suicide, the refuge of fallen and vanquished pride. Self-murder here, like duelling in Europe, seems to be the point of honour among the great; and the nobles, even when condemned to death by the sovereign, reserve the privilege of executing the sentence with their own hands.

This people differs also from the Chinese, in being of a deeply religious character. There are two religions in Japan; one native, called the Sintos, at the head of which is the dairi; the other, the Boodh, called here Budso, the same which prevails over all eastern Asia. The Budso gains ascendency by mingling with the original system those attractive accessories which it possesses in common with the Catholic,—monasteries, processions, beads, drums, noisy music, and the belief of purgatory; which, though condemned by the pure and orthodox Sintoists, has a general influence over the people. The Sintos profess to believe in a supreme ruler of the universe, and among their number is distinguished a class of pure and philosophic worshippers, who entertain lofty conceptions of the Deity, and cultivate the practice of virtue as the chief means of gaining his favour. Their belief, however, being thought to resemble the Christian, fell into some discredit, when the latter became the object of such deadly persecution. The mass of the nation, for whom such tenets were far too refined, have always been addicted to gross and varied superstition. Deified kings and heroes, rulers of the respective elements, local genii, who preside over woods, form the usual and natural elements. Amid the paucity of real animals, they have invented also a number of fanciful and mythological creatures, who are the objects to them of a species of worship. The dragon, also a Chinese monster; the kirin, a winged quadruped, and the foo, a beautiful bird of paradise, are all accounted peculiarly sacred. The religion of the Japanese deals

much in festivals, of which they have five great annual ones, besides three smaller, celebrated every month, rather with visiting, eating, drinking, and somewhat disorderly mirth, like the bacchanals of the ancients, than with any observance that can properly be called religious. But pilgrimage is the custom to which they adhere with the greatest zeal, and from which they promise themselves the greatest benefit, temporal and spiritual. No one can be accounted at all eminent in sanctity, or have any assurance of the forgiveness of his sins, who has not been once a year at Isje, the grand temple of the Tensio Dai Sir, or first of the celestial spirits, situated in a province of the same name. The roads in summer are completely choked with the crowds of devout worshippers, on their way to the sacred shrine. As many have not the means of paying their own way, a large proportion betake themselves to begging, and, prostrate on the ground, call out to the rich passengers, "A farthing to carry me to Isje!" In order to draw notice and favour, they exhibit images of a many-headed idol, called Quanwan; of Amida, the judge of departed souls; of Temacco, keeper of the prison of condemned souls; of Driso, supreme commander of purgatory; and of other deities. Others seek to gain acceptance by praying, singing, playing on fiddles, guitars, and other musical instruments, or by the performance of juggling tricks. On meeting with success in any of these departments, they often betake themselves wholly to the pursuit, and make a permanent increase to the crowds of beggars with which the country is infested. Such a step they consider themselves fully privileged to take, after they have shaved their heads, and devoted themselves to a particular religious order. Among these shaved beggars are prominent a class of bikerni, or nuns, who appeared to Kæmpfer the handsomest females he had seen there. Many of them had exchanged for it an employment the least honourable to their sex, which they were suspected not to have wholly relinquished. Isje, the object of all these pilgrimages, presents nothing that corresponds to its fame, or the magnificence of the empire. It is rather held forth as a monument of antique poverty and simplicity. It is a mere low wooden hut, with a flat thatched roof, and the interior contains only a looking-glass of cast metal, and some cut paper, to both of which a mythological import is assigned. In the surrounding plain are about 100 chapels, equally of poor materials, and so small that a man cannot stand upright in them. To each of these is attached a canusi, or priest, under one of whom the newly arrived pilgrim places himself. After a due round of prostrations, supplications, and above all, of gifts, to the utmost amount of his real or supposed ability, he is presented with an ofarrai, or indulgence, consisting of a small oblong box, filled with little pieces of wood wrapped in white paper, which is supposed to ensure the pardon of sins, and exemption from temporal evil for a year to come; at the end of which period, no zealous Sintoist is satisfied unless he can undertake another pilgrimage. Even those who are not so fortunate carefully preserve their ofarrai, and consider it through life as a valuable possession. The Budso temples are much more magnificent than those of the Sintos. They are placed usually on an elevated spot, surrounded with beautiful groves. Their ornaments, but for the peculiar form of the idols, would make the traveller imagine that he was in a European cathedral.

Of the progress of the Japanese in arts and sciences our knowledge is very scanty. Their mode of printing, and their ideas on speculative subjects, are fundamentally Chinese. They are far, however, from displaying that proud indifference and disdain of every thing foreign, which bars all approach to improvement. Their minds are active, and imbued with the most eager curiosity on all subjects. On the few occasions allowed to them by the jealous rigour of their government, they have harassed Europeans with multiplied questions, respecting those branches of knowledge in which they felt and admitted their superiority. Their attention seemed peculiarly devoted to astronomy, and the calculation of eclipses. According to M. Titsingh, they have herbals drawn and coloured with taste; maps and plans carefully designed, though destitute of the important particular of latitudes and longitudes. Poetry is held in honour; but no specimens have yet been afforded that can enable us to judge of their proficiency in this noble art.

The buildings in Japan are of excessively slight materials,—the walls of clay; so that a smart kick would beat a hole through them. The interior is divided into partitions with pasteboard, and the walls covered with paper, which, in the houses of the great, is elegantly painted and varnished. As the natives sit on the floor, there is no occasion for chairs, tables, or that variety of furniture which graces a European apartment. Pomp is chiefly displayed in the number and beauty of the mats with which the floor is spread; and the great imperial hall is called "the hall of the thousand mats." Every thing is kept nicely clean and fresh as if new. Such habitations, however, are little better than matches to kindle fire; so that, notwithstanding a large depôt of water kept at the top of every house, the cities are often desolated by the most dreadful conflagrations.

The diet of the Japanese is remarkably simple. They surpass the Hindoos in abstinence; not only avoiding animal food, but even milk and its productions. Hot rice cakes are the standard food, and are kept ready at all the inns, to be presented to the traveller the moment he arrives along with tea, and occasionally sacki, or rice beer. Tobacco affords the chief and constant

social indulgence. Their dress is equally plain. It consists merely of a large loose robe, resembling our bed-gown, made of silk or cotton, and varying in the different ranks only as to the degree of fineness. They have straw shoes, which they put off at the door. They shave their head, leaving only a tuft on the crown, and usually have it bare, unless on their journeys, when they cover it with an enormous cap, made of plaited grass or oiled paper (*fig.* 698.).

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Japanese Costume.

In travelling, the Japanese spend more time than perhaps any other nation. The tokaid, or main road, is described by Kæmpfer to be usually as crowded as the streets of the most populous cities in Europe. This is owing to their numerous pilgrimages; to the extent of their inland trade; and, most of all, to the immense retinues which attend the princes in their annual journeys to and from the court of the cubo. The retinue of one of the very first rank is computed to amount to 20,000, and covers the roads for several miles. First appears a crowd of outriders, cooks, clerks, and other inferior functionaries. Behind is the heavy baggage, which is followed by a number of secondary nobles, also attended with numerous retinues. The prince then appears, surrounded by a varied and splendid train, composed of led horses, servants richly dressed bearing lackered chests, pikes ornamented with feathers, rich scimitars, and other arms. The household officers, with considerable trains of their own, close the procession. That such a retinue may pass without inconvenience or collision, all the inns are engaged for a month before; and in all the towns and villages on the route, boards are set up to announce that, on such a day, such a great lord is to pass through.

Sect. VII.—*Local Geography.*

Japan must, no doubt, comprise many interesting local features; but these being shut with such jealous care against Europeans, and all hope being excluded of viewing or visiting them, they are to us almost as if they existed in another planet. Something must, however, be said of the two capitals, civil and ecclesiastical, Jeddo and Meaco.

Jeddo, now the seat of the ruling power, and the real capital of Japan, lies at the head of a deep bay on the eastern coast of Niphon, and at the mouth of one of the few rivers which possess any considerable magnitude. It is seven miles long and five broad, and contains many splendid palaces of the great lords, all of whom must reside in it for a great part of the year. These mansions are surrounded by wide enclosed courts and extensive gardens; yet they cannot be said to possess much architectural grandeur, since they are only one story high; the walls of clay, the partitions of paper, and adorned merely with painting, varnishing, and fine mats spread on the floor. The palace, however, though equally low, is built of freestone, and is five leagues in circumference, including a wide exterior area occupied by the spacious mansions of the princes and great lords of the court. Its grand apartment, the hall of the thousand mats, is said to be 600 feet long by 300 broad, and is brilliantly adorned by pillars of cedar, painted papers, and gilded dragons on the roof. The city is subject to dreadful fires, one of which, in 1703, consumed 100,000 houses. It is the seat of varied branches of industry, and carries on also a great internal trade.

Meaco is at a considerable distance from Jeddo, near the southern extremity of Niphon, at a little distance in the interior. This spiritual capital of Japan is still the chief seat of polished manners, refined arts, and intellectual culture. The finest silk stuffs flowered with gold and silver, the richest varnishes, the best painted papers, and the most skilful works in gold, silver, and copper, are here manufactured. It is likewise the centre of literature and science, and most of the works which are published and read in Japan issue from its presses. Although there is no longer the means of supporting the same display of pomp and wealth as at Jeddo, yet there is a greater display of architectural ornament. The palace, or enclosed city, of the sovereign is on a similar plan; but the religious structures, though built only of cedar, are some of them truly splendid, richly gilded, and placed in the most picturesque and commanding situations. Kæmpfer calculates that there are, in and around Meaco, not less than 3893 temples, served by 37,093 suikku, or priests. Of these, however, the greater part are only wooden huts, and have nothing within but a looking-glass and some cut white paper. The lay inhabitants, according to the last enumeration, were 477,000 and the ecclesiastical, including the court, 52,000; making in all, 529,000.

Osaka, at the mouth of the river on which Meaco is situated, is a flourishing sea-port, intersected, like Venice, by numerous canals, which are connected by bridges of cedar.

The Japanese, as already observed, have now occupied all the southern parts of the great island of Jesso which are accessible and improveable. Matsmai, the capital, is supposed, by Golownin, to contain 50,000 souls.

Nangasaki, that interesting point at which alone this empire comes in contact with any foreign nation, must be noticed in closing our account with Japan. It is a large, industrious, trading town, containing sixty-one streets, arranged without much beauty or order. On the small adjoining island of Dezima, separated from it only by a narrow channel, the Dutch are allowed to carry on their scanty commerce. They have here a space of 600 feet long by 120 broad, on which they have erected several large storehouses, and rendered them fireproof. The most unheard-of precautions are taken to prevent any contraband transaction, commercial or political. The pockets of the officers and crew are turned inside out, and the hands passed over the clothes, and through the hair. The trunks and chests are emptied, and the boards struck, lest they should contain any secret cavity. Long wires or pikes are thrust through the cheeses, butter tubs, and jars of sweetmeats. Dezima is to the Dutch a complete prison, the gates of which are locked every night, and a guard set over them. Buried in this dungeon, they remain ignorant of all that is passing in the world, and gradually lose all curiosity on the subject. Even the faculty of the will becomes extinct, for want of exercise; so entirely are they under the control of the Japanese. Yet it is confidently asserted that these accumulated precautions are insufficient to guard against the powerful impulse of self-interest, and that contraband trade is carried on to a considerable extent.

CHAPTER XIV.

EAST INDIAN ARCHIPELAGO.

THE East Indian Archipelago is the name usually given to a range of fine and large islands, lying east of Hindostan, and south of Further India and of China. Although they have few political ties with each other, and each island is even subdivided into separate states, the aspect of nature, the state of civilization, the peculiar character of the people, present such a similarity, that they may be advantageously treated under one head.

SECT. I.—*General Outline and Aspect.*

The principal islands of this range are Sumatra, Java, Borneo, the Molucca or Spice islands, and the Philippines; and it includes, also, several smaller islands and groups. The archipelago, in general, has, on the east the Pacific, on the west the Indian Ocean; and seas and straits, connected with these, separate it on the north from Further India and China, on the south from the great islands of New Holland and New Guinea. Situated almost directly beneath the equator, it extends from east to west somewhat more than thirty degrees, or 2100 miles.

Mountains, in lofty ranges, and bearing often a volcanic character, traverse the interior of all the great islands. Mount Ophir, in Sumatra, according to the measurements of Captain Nairne, rises to the height of 13,842 feet. The peaks of this tropical region, however, seldom exhibit that dreary and desolate aspect usual at so great an elevation. On the contrary, they are crowned almost to their pinnacles with lofty forests, luxuriant shrubs, and aromatic plants, presenting the most varied and picturesque scenery.

Rivers cannot attain any great magnitude, in a region thus broken into islands, each of which has a high chain of mountains extending through its length, which leaves only a plain of moderate breadth between it and the sea. The streams are numerous, and highly beneficial for irrigation. They are perennial, produced by rains which, in countries so near the equator, fall constantly throughout the year; while those of Hindostan are dry during six months. Many of them form at their mouth commodious harbours, and minister to the purposes of trade; but, from the causes above stated, can be only of limited and local importance. Lakes, from the same structure, are comparatively few; though some, imperfectly known, exist in the interior of the mountain regions, particularly of Sumatra and Luconia.

References to the Map of the East Indian Archipelago.

LUCON.
1. Mani
2. Badoc
3. Pueblo de Sina
4. S. Cruz
5. Marigloc.

MINDANAO.
1. Butuan
2. Cagayan
3. Misamis
4. Mindanao.

BORNEO.
1. Borneo
2. Montradock
3. Mompava
4. Pontiana
5. Banjarmasin
6. Passir Town.

CELEBES.
1. Kemar
2. Goonong Talla

3. Bool
4. Palos
5. Waja
6. Tanneta
7. Maros
8. Macassar
9. Boola Comba.

JAVA.
1. Bantam
2. Batavia
3. Cheribon
4. Samarang
5. Sourabaya.

SUMATRA.
1. Acheen
2. Soosoo
3. Deli
4. Asahan
5. Bacongong
6. Tappanooly
7. Rawa
8. Natal
9. Ippoo
10. Ayrpoor
11. Bencoolen
12. Manna
13. Cawoor
14. Croce
15. Tulang Bawang
16. Palembang.

MALAYA.
1. Bangri
2. Patani
3. Queda
4. Prince of Wales's Island
5. Dutch Factory
6. Salangore
7. Malacca
8. Singapore.

PACIFIC OCEAN
INDIAN OCEAN
BAY OF BENGAL
BIRMAN EMPIRE
GULF OF SIAM
MALAYA
CELEBES SEA
JAVA SEA
PAPUA
GUINEA
PHILIPPINES
Longitude East 115 from Greenwich
English Miles

SECT. II.—*Natural Geography.*

SUBJECT. 1.—*Geology.*

The geology of the Indian Archipelago is so very imperfectly known, that we cannot lay before our readers more than the following notices.

Sumatra. Four volcanoes, one of them called Gunong Dempo, rising about 12,000 feet above the level of the sea, are described as existing in this island. Granite and other primitive rocks are enumerated as products of Sumatra; and trap, limestone, and clays, probably of tertiary formation, form the lower parts of the country.

Java. Several ranges of volcanic mountains and hills, some of them 12,000 feet high, exist in this island. Extending from these are considerable tracts of low and flat country, composed of limestone, clay, marl, and salt, which may be of tertiary formation. In these tertiary districts there occur ***salses*** resembling those at the foot of the Apennines, and also numerous salt springs.

Banca. The principal mountains in this island are composed of granite, with its generally associated gneiss and mica slate. These are said to be immediately bounded by a formation of red ironstone; but Crawfurd, who makes this statement, gives no description of the formation. The low tracts are deeply covered with alluvium, which abounds in tinstone.

Borneo appears to abound in primitive and alluvial formations; the secondary and tertiary, and those of volcanic origin, have not as yet been accurately described. This great island is traversed by several chains of mountains, of which the principal one ranges north and south, not far from the east coast. These mountains abound in primitive rocks, which in many places afford numerous and large rock crystals. The lower districts contain various secondary formations, more or less deeply covered with alluvium. Volcanoes are mentioned as occurring in different quarters. The island is celebrated for its gold and diamonds.

Philippine Islands. These islands are represented as very mountainous, and abounding in volcanoes and sulphur.

Molucca Islands. The largest island of the group, Celebes, is said to be very rugged and mountainous. It contains several volcanoes in a state of activity; and primitive rocks, of various descriptions, more or less richly impregnated with gold, and diversified with cavities lined with rock crystals, occur in many quarters. The volcanic tracts afford immense quantities of sulphur. The smaller islands of this group are principally of volcanic formation.

The Indian Archipelago, as Crawfurd remarks, so remarkable for the rich variety of its vegetable and animal productions, is hardly less distinguished for its mineral wealth. The mineral products which particularly deserve notice, in a commercial point of view, are the following:—tin, gold, copper, iron, salt, sulphur, and the diamond.

1. *Tin.* Here, as in Europe, the only ore of this metal is the oxide of tin, or tinstone. In geographical distribution, tin is confined to the island of Banca, the Malayan peninsula, and the islets on its coasts, with Junkceylon. It exists either in greater abundance, or is obtained with least labour and difficulty, in the island of Banca, which affords at present by far the greater quantity of the tin of commerce of the Archipelago. In Banca, the principal mountains are of granite; while those of inferior elevation, according to Crawfurd, are of red ironstone. In the low tracts between these the tin ore is found, and hitherto always in alluvial deposits, seldom farther than twenty-five feet from the surface. The strata in which it is found are always horizontal. The tin of Banca and the other Indian islands finds its way into almost every part of the world; but China and the continent of India are its principal markets.

2. *Gold.* Next to tin, gold is the most valuable of the mineral products of the Archipelago. It is universally distributed throughout the Archipelago, but abounds most in those countries which are composed of primitive and transition rocks. It is most abundant in those islands which form the western and northern barriers of the Archipelago, and exists but in small quantities, rarely worth mining, in the great volcanic range extending from Java to Timor-laut. Borneo affords by far the largest quantity. Next to it is Sumatra, and, in succession, the peninsula, Celebes, and Luçon. In the great island of New Guinea gold occurs, but in what quantity is not known. In the Indian islands gold occurs either in fixed rocks or in alluvial deposits: the fixed rocks, mentioned by Crawfurd, are granite, gneiss, mica slate, and clay slate. The gold is never absolutely pure; always containing silver, and frequently copper. The gold of Banjar-laut, for example, usually contains, in 100 parts, gold 90 parts, silver 4 parts, and copper 6 parts. The gold of Larak, in the same island, affords, in 100 parts, gold 86 parts, silver 6 parts, and copper 8 parts. The gold of Pontiana, in 100 parts, contains 83 parts of gold, 16 of silver, and about 1 of copper. A small part of the gold of commerce of the Indian islands is obtained by mining in the solid rocks; some from washing the sand and mud of brooks and rivers, but by far the greater portion by washing deposits of

gold in alluvial districts. The annual amount of gold thus collected throughout the Archipelago is estimated by Crawfurd at 658,176*l.* sterling.

3. *Iron and Copper.* Iron and copper are, besides tin and gold, the only metals found in the Indian Archipelago. Iron occurs but in small quantity. Copper ores are met with in Sumatra, Timor, and in the territory of Sambas in Borneo. Copper is found in its native state in Sumatra and Timor.

4. *Diamond.* Borneo is the only Indian island which affords the most precious of all known minerals; and there the diamond is confined to the south and the west coast, principally in the territories of the princes of Banjarmassin and Pontiana. The principal mines are at a place called Landak, from which the diamonds of Borneo, to distinguish them from those of Hindostan, are usually designated. It is the same country that is most remarkable for the production of gold, in which the diamond is found. The diamond is in great repute among all the natives of the Indian islands, and, indeed, is the only gem in much esteem, or much worn by them. One of the largest known diamonds is now in Borneo, in the possession of the prince of Matan, and was found in the mines of Landak about a century ago. It is still in its rough state, and weighs 367 carats. Its real value is 269,378*l.*

5. *Sulphur.* There is no volcanic mountain in Java that does not afford sulphur, but the best and most abundant supply is obtained from the great mountain of Banyuwangi, at the eastern extremity of the island. Here, and in similar situations in Java, and other volcanic islands of the Indian group, sulphur is obtained without difficulty, and in such a state of purity as to require no preparation for the market.

6. *Salt.* Salt springs occur in several of the islands, more especially in Java, where they are very abundant. Much of the salt of commerce is obtained from these spring waters by evaporation.

Subsect. 2.—*Botany.*

Tropical Islands of Asia.—Under this head we include Ceylon, with the islands of the Malay archipelago; a country eminent from the earliest times, for the splendour of its vegetable productions, and more especially for their fragrance. But of all their wonderful productions, the most remarkable yet discovered is the Rafflesia Arnoldii (*fig.* 700.); a plant without stem, without leaves, with roots so minute that they are embedded in the slender stem of a species of vine, and as it were incorporated with that stem, yet bearing a flower of the most enormous dimensions. It is a native of Sumatra, and is one of the surprising novelties detected there by Sir Stamford Raffles, and his friend and medical attendant, Dr. Arnold. The first appearance of this extraordinary flower, upon the stem of the vine on which it grows parasitically, and where the seeds happen to alight, is that of a small tubercle, which almost resembles a swelling in the bark. This gradually enlarges, still preserving its rounded form, till the bud has attained its full size. It then considerably resembles a large cabbage. At length, the flower (the entire plant, indeed) expands, and presents a blossom of the most gigantic stature. Its diameter is three feet and a half, its weight fifteen pounds, and the hollow in the centre is of the capacity of fifteen pints, English measure. The thickness of the petals is not less than an inch and a half near the base: the colour a brick red, inclining to orange, wrinkled or embossed on the surface, and marked with deeper blotches of the same colour as the ground, and with white spots. The plant is dicecious. The stamens form a sort of beaded circle around a central abortive pistil; which is itself a large fleshy excrescence, flat at the top, and beset with elongated projections, which Dr. Arnold declares resembled cow's horns. This superb flower soon decays, and is endowed with a most powerful but disagreeable odour, which, like that of the Stapelias, attracts flies in great abundance. The plant has been admirably illustrated by the learned Brown, in the twelfth volume of the *Linnean Transactions*, with an explanatory figure from the pencil of M. Bauer. It is undoubtedly the largest known flower in the world.

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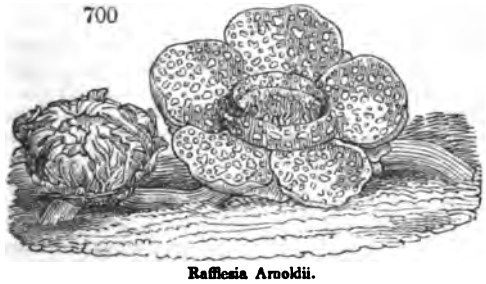

Rafflesia Arnoldii.

Scarcely less interesting, if we consider the structure of its foliage, is the famous Nepenthes distillatoria (*fig.* 701.), or Pitcher plant, a native of a considerable portion of Southern India, especially the islands, and formerly supposed to be peculiar to Ceylon. Other species, and even more curious in the nature of the leaves, are found in Java; but we shall confine our remarks to the species above mentioned, which has now attained to great perfection in the stoves of the botanic gardens.

There is not a more interesting spectacle of the kind, perhaps, in Britain, than the fine plant of Nepenthes which exists in the stove of the Botanical Garden at Edinburgh. Planted in a tub, whose soil is kept constantly moist by a covering of living Sphagnum and other Mosses, its stem, 18 to 20 feet long, rises from the midst of these; it is branched, and climbs among the wires that traverse the rafters of the roof, supporting itself by means of its tendrils, bearing, especially towards the extremity, very many leaves which look more like the contrivance of art than a production of nature. The whole leaf, including the petiole or stalk, is two feet and more in length. The petiole itself is, below the middle, winged with a very broad margin, to that degree that it is commonly taken for the leaf itself; upwards, it forms a long, stout, filiform cirrhus, or tendril, which is more or less spirally twisted, even when it does not catch hold of any surrounding object to support the parent stem. Its extremity hangs down, and is terminated by the true leaf, or leafy portion; but which, from its remarkable appearance, is called an appendage to the leaf. Instead of being flat, it is hollowed out, like an elongated pitcher; it is six to nine inches long, attenuated at the base, where it is curved or arched, and then it suddenly turns upward. It is obscurely striated, and on each side, at the front, marked with two prominent wings or membranes; it is ventricose upwards, slightly expanding at the mouth, which is oblique; in a young state completely and firmly covered by a lid or operculum, which is flat, and marked with two winged nerves, and fixed by the back to the upper margin of the mouth. After a time, this lid opens, still continuing attached by a point at the back; but which, though in the act of opening it supplies the place of a hinge, is not capable of any further movement: the mouth of the pitcher, which is heart-shaped, is now quite exposed to view, and exhibits a remarkably thickened margin, which is closely, transversely, and most beautifully plaited. The colour of the pitcher is pale green, often tinged and spotted with red, purple within, where it is glandular, especially near the base.

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Pitcher Plant.

As if the better to deserve the appellation of a pitcher, this curious leaf contains a watery fluid, which is secreted by the plant itself; for it is often most abundant while the lid is perfectly closed, and when the water could not be received by any external agency. Neither is this fluid of the nature of common water. In each of the unexpanded pitchers of the Edinburgh plant was about a drachm of limpid fluid. "This," says Dr. Graham, in his description of the plant, in the Edinburgh New Philosophical Journal, for 1827, "had a subacid taste, which increases after the rising of the lid, when the fluid slowly evaporated. My friend, Dr. Turner, perceived it to emit, while boiling, an odour like baked apples, from containing a trace of vegetable matter, and he found that it yielded minute crystals of superoxalate of potash, on being slowly evaporated to dryness. The pitcher whose contents Dr. Turner analysed was a large one; it had not opened, and the whole fluid weighed only sixty-six grains."

In the plants at the Glasgow Royal Botanic Garden, there is generally a very considerable quantity of this fluid, after the lid is expanded and the pitcher has attained its full developement; and, whether in pursuit of that liquid or from any other cause we are not able to say, insects are attracted thither in great quantities, and ants in particular; so that the pitchers are often found quite black within, from the accumulation of the dead bodies of the latter; and the quantity thus destroyed is very great.

In Ceylon, in China, and the other parts of India, where this plant is a native, it is probable that the secretion is far more abundant than when cultivated in stoves; and, if we may credit the narration of travellers, the pitcher is generally filled with a clear limpid fluid, and the lid is then closed; the latter opens during the day, and the water is reduced by one-half; but this loss is repaired during the night, so that next morning the pitcher is replenished, and anew closed by the lid. This alternate closing and opening of the lid is at variance with what we have observed in our plants. Small aquatic shrimps, too, Rumphius tells us, inhabit the fluid.

In some parts of India, Rumphius and Flacourt assure us that the natives entertain some curious and superstitious notions respecting this plant. They believe that if they sever the pitchers and pour out the water, it will not fail to rain during the day. When they dread this state of the weather, they are very careful not to cut the pitchers. On the other hand, in periods of great drought, they hasten to the woods, sever the pitchers of the Nepenthes, and pour out the liquid, firmly persuaded that rain will then ensue.

The generic name Nepenthes is derived from two Greek words, signifying, without sorrow. Homer speaks of an Egyptian planet called Nepenthes, which was employed by Helen to dispel grief from her guests: in the same way, probably, Linnæus, who applied the name in

the present instance, might suppose that the liquid contained in the pitcher was calculated to allay the thirst and consequent misery of the traveller. The word distillatoria, it will be immediately perceived, implies the secretion and concentration of the fluid in the pitcher. Thus we see how admirably are the names of plants calculated, in many cases, to characterise some property residing in the plant itself, or to impress some portion of its history on our minds!

We have a striking instance, in the plant cultivated at the Edinburgh Botanic Garden, of the importance of the stamens and pistil of plants. We have already observed that the Nepenthes is dicecious. The Edinburgh plant was a staminiferous one, and flowered annually; but, of course, bore no fruit. In the stove of Professor Dunbar's garden was a pistilliferous one; which, standing by itself, was equally barren. The blossoms of the latter were dusted with the farina from the former, when the germen ripened into perfect fruit.

The appearance of the germinating plant is most curious. The minute seeds, produced by the process just mentioned, readily vegetated on being sown in the spring in pots of peat earth, covered with a plate of glass, and standing in pans of water. They began to sprout in April and May. The plumule rises before the cotyledons are expanded: when the latter takes place, the first little pitcher appears in the centre; then the radicle pushes through the arillus in the opposite direction from the pumule. In a rather more advanced state, three pitchers are evolved, each with its closed lid, which is slightly muricated; and there are, upon the body of the pitcher, two prominent and ciliated wings. The cotyledons now begin to wither and to become deflected. Five pitchers are formed. These little pitchers, destitute of the broad leaf-stalks, present a truly extraordinary appearance, rising a little above the surface of the ground, and of the most beautifully delicate texture.

If the islands now under consideration astonish us by the singularity of some of their vegetable products, the importance of others, in a commercial point of view, renders them equally interesting. A large group of them is especially termed the Spice Islands; a denomination which, though usually limited to part of the Malay Archipelago, may with equal justice be extended to Ceylon. Linnæus, who has drawn a beautiful, though too highly coloured, picture of the vegetation of Ceylon, while comparing it with that of northern Europe, says of it,—"A delicious climate has afforded plants of such rarity and value to this island, that scarcely any other soil can vie with it in the abundance of its aromatic productions. While Pine forests occupy our cold and sterile regions, in Ceylon Cinnamon trees constitute whole groves; in such plenty, indeed, that the inhabitants are accustomed to employ the wood for household furniture, for fuel, and for cooking. Our gardens are planted with apples, pears, plums, cherries, and other similar trees; but in Ceylon, nothing save the lofty Palms are esteemed, among which the Cocoa-nuts chiefly afford the needful food, utensils, and every thing necessary to mankind. The Caryota there yields a wine, called sury. The Coryphæ (*fig.* 702.) extend their broad, smooth, and plaited fronds, which serve for shade and shelter, here most requisite for protection from the sun's rays, as well as from sudden showers, to the natives, whose only garment is a small piece of linen. Date Palms, and the superb Bananas, decorated with wide-spreading and glossy foliage, yield, in great profusion, racemes of the most delicious fruit; to say nothing of the more valuable productions with which the soil everywhere abounds, such as Mangoes, the Jack, Malay Apples, Psidia, Oranges and Citrons, Cashew nuts, Averrhoas, &c. Our fields are sown with common Barley and Rye; but those of the Cingalese receive nothing but Rice, which affords them flour and bread. Our marshes are covered with Callæ; theirs with the pungent Amoma. Persicarias occupy our waste places; but with them grow different species of Pepper. In our meadows spring the Ranunculus, Plantain, Convallariæ, and many other neglected plants; in theirs, numerous kinds of Hedysarum, Galega, Hibiscus, Justicia, Cleome, Impatiens, Amomum, Myrtle, and Ricinus; besides numerous climbers, as Ipomœa, Dioscorea, Basella, Aristolochia, Ophioglossum, Phaseolus, Momordica, Bryonia, Vine, Cissus, Pothos, Loranthus, and Acrostichum. In the room of the Meadowsweet and Mints, the meadows in Ceylon are covered with Basil, and the woods with Cinnamon. Everywhere occur the most precious aromatics. Ginger, Cardamom, Galanga, Costus, Acorus, Schœnanthus, Calamus aromaticus, and flowers of the most exquisite structure and colour and fragrance, such as Crinum, Pancratium, Poinciana, Gloriosa, as well as those plants which saturate the night air with their delicious odour, such as Polyanthus and Nyctanthes." Most of these are equally natives of the islands of the Archipelago.

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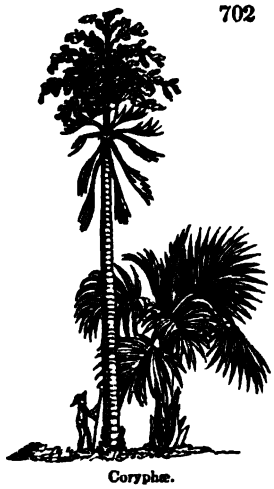

Coryphæ.

The Cinnamon, for which Ceylon is so famous, is the bark of a species of Laurel (*Laurus Cinnamomum*) (*fig.* 703.), remarkable, with some other species possessing similar properties, for its coriaceous leaf, marked with three strong nerves. It was originally found wild, only, and there in very small quantities, at the south-western district of the island; but when the Dutch first obtained a settlement in Ceylon, they found so many inconveniences to arise from this limited supply, that they began to cultivate the cinnamon in four or five very large gardens, under the auspices of the enterprising Governor Falck. The extent of these plantations may be inferred from the fact, that the quantity of spice annually obtained from them exceeded 400,000 lbs., and that from 25,000 to 26,000 persons were employed in the cinnamon department.

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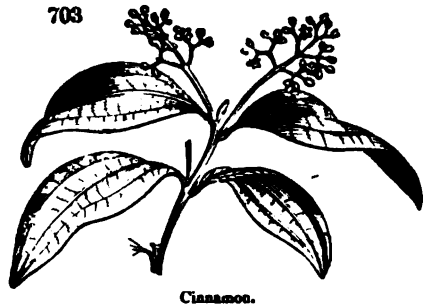

Cinnamon.

The rigour with which the Dutch enforced the regulations by which they kept the monopoly of cinnamon to themselves is truly revolting, and forms a blot on their national character. Death was the punishment awarded, and mercilessly inflicted, on any person who should wilfully injure a cinnamon plant, or even sell or give away a single stick of it, or extract the oil from the foliage, or peel off any of the bark. In order to keep up the high price of the spices, the Dutch government used to have them destroyed, when the stock had accumulated, sometimes by throwing them into the sea, and sometimes by burning them. On one occasion, in the year 1760, a pile of these aromatics was consumed near the stadthouse, at Amsterdam, of which the price was estimated at 8,000,000 livres, and a similar wanton destruction took place on the following day. The air was perfumed with this incense, and the essential oils were distilled, and flowed in a spicy stream down the street, to the regret of the spectators, who were not permitted to appropriate the smallest portion of the valuable substance.

The cinnamon tree grows, in a natural state, to twenty or thirty feet high, and sends out large spreading branches, clothed with thick foliage. The leaves are first quite pendent, of a delicate rose colour, and most tender texture; they soon, however, turn yellow, and then green. The flowers are borne in panicles, and are small and white; partaking, as well as the foliage, of the peculiar fragrance of the tree. The fruit yields an oil, which becomes waxy and solid, and of which a kind of candles is made, whose agreeable odour caused them to be appropriated, in the kingdom of Candy, to the use of the court.

When the cinnamon tree is three years old, it affords one shoot fit to yield bark: but eight years of growth are needful before it can be freely cut. At ten or twelve years old, the tree is strongest, and those plants which grow in dry and rocky spots produce the most pungent and aromatic bark. The shoots are cut when nearly an inch thick, and two or three feet long; they are immediately barked, and the epidermis scraped off, during which process a delightful fragrance is diffused around. The bark is dried in the sun, when it curls up, and acquires a darker tint, and, the smaller portions being rolled within the larger ones, the whole is packed, and considered fit for exportation. Two harvests are sometimes obtained annually from the same trees. Cassia, or Laurus Cassia, is in its botanical characters scarcely different from the true cinnamon. In quality it is much inferior, though often surreptitiously sold for it. It is commonly known under the name of Bastard Cinnamon.

Camphor is equally the produce of a species of Laurel (*Laurus Camphora*) (*fig.* 704.); but its leaves do not exhibit the three strong parallel nerves of the L. Cinnamomum and L. Cassia. The whole tree has a strong odour of camphor, and this substance is obtained by the distillation of the roots and smaller branches. They are cut into chips, and distilled within an iron pot, in which they are suspended above boiling water; the steam of which, penetrating the twigs, causes the camphor to fly off, and it becomes concreted on straws which are placed in the head of the still. Camphor is much employed in medicine as a stimulant and cordial.

The Sumatran Camphor is found concreted in the clefts of the bark of Dryobalanops Camphora. This is said to be more expensive and fragrant than the Japanese kind, and does not so soon evaporate on exposure to the air. It is sent, therefore, to China and Japan, where it is more highly valued than the native produce of these countries: this last, however, and not the Sumatran, is the camphor usually imported into this country.

The Clove (*Caryophyllus aromaticus*) (*fig.* 705.) is one of the most precious commodities of the East, and one of the most valuable in commerce. Almost every part of the plant is covered with minute dots or glands, which contain the essential oil that gives the aromatic odour to it. These abound, particularly, in the substance of the germen, near the epidermis.

The clove was introduced to the Kew Gardens, in 1797, by Sir Joseph Banks. Its native country is the Moluccas; but, from its value as a spice, its culture has extended to the East and West Indies; and we must endeavour to lay before our readers some details respecting a plant of such importance, that it was once the staple commodity of some of the East India Islands, particularly Amboyna.

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Camphor.

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Clove.

The clove of merchandise is the unexpanded flower; the corolla forming a ball or sphere on the top, between the teeth of the calyx: thus, with the narrow base or germen tapering downwards, giving the appearance of a nail; a similarity, indeed, much more striking in the dry than in the fresh state of the bud. Hence the Dutch call it naghel; the Spaniards, clavo; the Italians, chiodo; and the French, clou; from which the English clove is evidently derived. The uses of cloves are well known, as giving flavour to dishes and wines; and as stimulant, tonic, and exhilarating in medicine. These properties, with the acrid and burning taste, depend on the essential oil, which is obtained from them by distillation.

The cloves are gathered by the hand, or beaten with reeds, so as to fall upon cloths placed under the tree, and dried by fire; or, what is better, in the sun. The fully formed berries, which are about an inch long, pear-shaped, and of a beautiful violet colour, are preserved in sugar, and eaten after dinner, to promote digestion.

The true Nutmeg-tree (*Myristica officinalis*) (*fig.* 706.) is, as well as the Clove, a native of the Molucca or Spice Islands, and principally confined to that group called the Islands of Banda, where it bears both blossom and fruit at all seasons of the year. In their native country, the trees are almost always loaded with blossoms and fruit. The gathering of the latter takes place at three periods of the year: in July and August, when the nuts are most abundant; but the Mace is thinner than on the smaller fruits, which are gathered during November, the second time of collecting: the third harvest takes place in March, or early in April, when both the Nutmegs and Mace are in greatest perfection, their number not being so great, and the season being dry. The outer pulpy coat is removed, and afterwards the mace, which, when fresh, is of a beautiful crimson colour, and covers the whole nut. The nuts are then placed over a slow fire, when the dark shell which, immediately beneath the mace, coats the seed, becomes brittle; and the seeds, or nutmegs of commerce, drop out: these are then soaked in sea water, and impregnated with lime, a process which answers the double purpose of securing the fruit from the attacks of insects, and of destroying the vegetating property. It, further, prevents the volatilisation of the aroma. The Mace is simply dried in the sun, and then sprinkled with salt water, after which it is fit for exportation. The uses both of nutmegs and mace are well known, whether in a medicinal or economical point of view. The whole fruit, preserved in sugar, is brought to table with the dessert, but not till after the acrid principle has been, in a great measure, removed, by repeated washings. An essential oil is obtained from both these spices, by distillation, and a less volatile one, by expression.

706

Nutmeg.

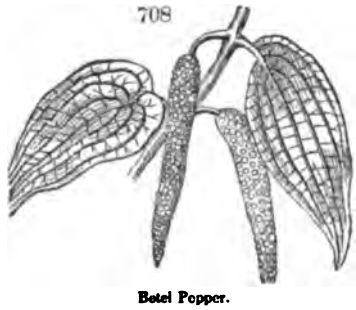
Pepper, the seeds of Piper nigrum (*fig.* 707.), is another spice, which is extensively cultivated in the islands in question, as well as on the coast of Malabar, and forms an important article of trade. It was known to the Greeks in the time of Theophrastus and Dioscorides, who, as well as the Romans, distinguished between the white and black pepper. And whilst the use of Betel Pepper, to which we shall next allude, is confined almost wholly to the Eastern nations, the common pepper is an article of general use throughout the civilised world. Still, it is in Asia, where the stomach is weakened by excessive perspirations, produced by the heat of the climate, by a humid atmosphere, and a too general addiction to vegetable diet, that it is employed as a powerful stimulant. Thus, in a medical point of view, it has been found to act as an excellent tonic, calculated to create appetite and promote digestion. The Pepper plant, or Pepper vine, as it is commonly called, is a weak climber, which attaches itself by small fibres to other bodies, or to the ground, like ivy; it bears large heart-shaped, veiny leaves, and long slender catkins of flowers, succeeded by the berries, which we term peppercorns. These, when covered with their natural husk or coat, constitute black pepper. White pepper is the same fruit, deprived of its outer covering, which is accomplished by soaking the grains in water, when the coat swells and bursts. It is afterwards dried in the sun, and, by friction and winnowing, cleared of the husk. It is then of a paler colour; but, as the shell or bark contains a powerful principle, it is evident that white pepper loses much of its stimulating property, and is inferior to the black. Mr. Marsden informs us, that as soon as any of the corns on a bunch change from green to red, it is considered fit for gathering; for, if pulled ripe, many of the seeds would drop off. It is collected and spread to dry in the sun; nor are the vicissitudes of weather that may occur during its exposure thought to injure it. In this situation it becomes black and shrivelled, as we see it in Europe, and is hand-rubbed, to separate the grains from the stalk. That which is pulled at the most proper stage of maturity will shrivel least; if plucked too soon, it falls into dust. Thus, weight is the great test of goodness in pepper, and machines are constructed for the purpose of separating the light kind from the sound. Two crops are generally produced in one year; the culture is attended with some trouble, as it is necessary to keep the pepper gardens scrupulously free from weeds, and to give them sufficient irrigation. In the small island of Penang, the crop of pepper, in 1802, was estimated at about 216,000 dollars. Sumatra also yields this spice; but the quantity is inconsiderable when compared with the produce of the coast of Malabar, whence no less than ten full cargoes, amounting to 8,000,000 or 9,000,000 lbs., might be annually exported. But half this quantity is carried over the mountains to the coast of Coromandel, to the north, to the Deccan, and farther on, to different parts of Hindostan. This pepper is esteemed the best in all Asia, and is most sought after by foreign nations.

707

Pepper.

Another kind of pepper in general cultivation and repute throughout India, is the Piper Betle, or Betel pepper (*fig.* 708.). Its use may be traced to a very remote date; for, in an ancient Sanscrit inscription on stone, published in the Asiatic Researches, this plant is reckoned among the greatest blessings of the country; "in its towns are numerous groves of mangou, plantations of luxuriant betel, and fields of rice; channels of water, and wells; opulent men and beautiful women; temples of gods and of the saints; and men blessed with vigour of body and every virtue."

708



Betel Pepper.

The habit of this plant resembles black or common pepper; but the leaves and catkins are much larger, the former of an oblong shape, and more oblique, and the corns or seeds infinitely bigger. In the East Indies, and especially the Malay islands, the inhabitants have, almost from time immemorial, considered the Betel Pepper as a necessary of life; and this, not by itself, but with the use of lime and the Areca nut, together constituting a masticatory, employed by both sexes, and at all ages. Various travellers relate particulars of the use of this plant; but we shall confine ourselves to those of Marsden, in his History of Sumatra; the custom of chewing the Betel-leaf being, perhaps, more prevalent among the Malays than any other nation. "Whether," he says, "to blunt the edge of painful reflection, or owing to an aversion our natures have to total inaction, most nations have been addicted to the practice of enjoying, by mastication or otherwise, the flavour of substances possessing an inebriating quality. The South Americans chew the Coco and Mambeco, and

the Eastern people, the Betel and Areca; or, as they are called in the Malay language, the Sirih and Pinang. This custom is universal among the Sumatrans, who carry the ingredients constantly about them, and serve them to their guests on all occasions; the prince in a gold stand, and the poor man in a brass box or mat bag. The betel-stands of the better ranks of people are usually of silver, embossed with rude figures. The Sultan of Mocc-moco was presented with one by the East India Company with their arms on it; and he possesses another, besides, of gold filigree. The form of the stand is the frustum of an hexagonal pyramid reversed, about six or eight inches in diameter. It contains many smaller vessels, fitted to the angles, for holding the nut, leaf, and chunam, which latter is quicklime made from calcined shells; with places for the instruments employed in cutting the first, and spatulas for spreading the last. When the first salutation is over, which consists in bending the head, and the inferior's putting his joined hands between those of the superior, and then lifting them to his forehead, the betel is presented as a token of politeness, and an act of hospitality. To omit it on the one hand, or to reject it on the other, would be an affront; as it would be likewise, in a man of subordinate rank, to address a great man, without the precaution of chewing it before he spoke. All the preparation consists in spreading on the Sirih, or Piper Betle leaf, a small quantity of the chunam, and folding it up with a slice of the Pinang nut. From the mastication of these proceeds a juice which tinges the saliva of a bright red, and which the leaf and nut, without the chunam, will not yield. This hue, being communicated to the mouth and lips, is esteemed ornamental; and an agreeable flavour is imparted to the breath. The juice is usually (after the first fermentation produced by the lime), though not always, swallowed by the chewers of betel. We might reasonably suppose that its active qualities would injure the coats of the stomach: but experience seems to disprove such a consequence. It is common to see the teeth of elderly persons stand loose in the gums, which is probably the effect of this custom; but I do not think it affects the soundness of the teeth themselves. Children begin to chew betel very young, and yet their teeth are always beautifully white, till pains are taken to injure them, by filing and staining them black. To persons who are not habituated to the composition, it causes a strong giddiness, astringes and excoriates the mouth and fauces, and deadens for a time the faculty of taste. During the Pausa, or fast of Ramadan, the Mahometans among them abstain from the use of betel whilst the sun continues above the horizon; but, excepting at this season, it is the constant luxury of both sexes from an early period of childhood: till, becoming toothless, they are reduced to the extremity of having the ingredients previously reduced to a paste for them, that without further effort the betel may dissolve in the mouth. Mixed with the betel, and generally in the chunam, the Sumatrans have a practice of conveying philtres, or love-charms. How far they prove effectual I cannot take upon me to say; but I suppose they are of the nature of our stimulating medicines. The custom of administering poison in this manner is not followed in later times; but that the idea is not so far eradicated as entirely to prevent suspicion, appears from this circumstance; that the guest, though taking a leaf from the betel-service of his entertainer, not unfrequently applies to it his own chunam, and never omits to pass the former between his thumb and fore-finger, in order to wipe off any extraneous matter. This distrustful procedure is so common as not to give offence."

Among those plants which are natives of the islands of the Indian seas are several belonging to an extensive natural family which has been ably and splendidly illustrated by the lamented historian of Leo X.; we mean the Scitamineous plants: and so peculiarly do they inhabit the countries just mentioned, that these are denominated by M. Schouw, par excellence, "the region of Scitamineæ." Among them are reckoned some species of Canna or Indian Shot, of Arrowroot (*Maranta*), of Phrynium, Hedychium, Roscoea, Alpinia, Ginger, Costus, Kæmpferia or Galangale, Amomum, Turmeric (*Curcuma*), Globba, Mantisia, &c. True Ginger is afforded by the roots of Zinziber officinale; a plant so easy of cultivation in tropical countries, that imported into the New World it is extensively grown in the West Indies, and on the continent of South America. Edwards, in his History of the West Indies, assures us that, as early as 1547, its culture was so diffused in New Spain, that 22,053 cwt. were thence exported to Europe in one year. Kæmpferia Galanga (*fig.* 709.), the officinal Galangale, and K. angustifolia are both employed as medicinal plants, and are stomachic and cephalic. Curcuma Zerumbet or Zedoary is likewise a celebrated Indian plant belonging to this family. Rice (*Oryza sativa*), though cultivated in all warm climates throughout the world, is considered of Asiatic origin, and is nowhere more extensively raised or more valued, than throughout the islands of the East Indies.

709

Kæmpferia Galanga.

Among the numerous fruits of these islands, we shall only now mention the Guava (*fig.* 710.). (*Psidium pyriferum*), the Mango (*Mangifera indica*) (*fig.* 711.), the Mangoostan

710

Guava.

711

Mango.

(*Garcinia Mangostana*) (*fig.* 712.), the Durion (*Durio Zibethinus*) (*fig.* 713.), and the Malay Apple (*Eugenia malaccensis*), which, highly as they are prized in their native country, the

712

Mangoostan.

713

Durion.

utmost skill of British Horticulture has never been able to bring to any thing like perfection in the stoves of England, where indeed it is exceedingly difficult to cultivate many of them at all.

SUBSECT. 3.—*Zoology.*

The Zoology of the Indian Archipelago is so remarkable for the variety, splendour, and singularity of its forms, that it is difficult to say in which department it is most interesting. Flourishing beneath a tropical sun, and nourished by marine vapours in a soil naturally humid, vegetation here attains a luxuriance inconceivably magnificent. Animal life equally partakes in this exuberance, and exhibits, under every form, the most singular shapes, and the most brilliant combinations of colours. It is in these distant and little known islands that the great satyr-like Apes dwell in the solitude and the security of their native forests; while the surpassing beauty of the Birds of Paradise, and the numerous variety of superb-coloured Lories, are among the most striking features in their ornithology. As most of the large islands possess many animals hitherto undiscovered in others, we shall notice them under distinct heads.

JAVA. The Zoology of Java derives peculiar interest from having been investigated by two eminent naturalists, the late Sir Stamford Raffles, and Dr. Horsfield. Under the liberal auspices of the East India Company, the researches of the latter have been given to the public. We are thus enabled to put aside the vague and erroneous accounts of travellers, on which, unfortunately, we are too often obliged to depend; and can confidently

enumerate the chief peculiarities in the zoology of Java, one of the most important islands in India.

The great number of native quadrupeds belonging to this island will become apparent from the following list:—

Semnopithecus maurus. Negro Monkey.
Nycticebus javanicus. Javanese Lemur.
Megaderma trifolium. Three-leaved Bat.
Ronolphus, six species.
Nycterus javanica. Javanese Bat.
Vespertilio, five species.
Nyctinomus delatus. Delated Bat.
Nyctinomus tenuis. Slender Bat.
Cheiromeles torquatus. Collared Bat.
Pteropus edulis. Eatable Bat.
Pteropus minimus. Little Bat.
Tupaia javanica. Javanese Tupaia.
Tupaia ferruginea. Ferruginous Tupaia.

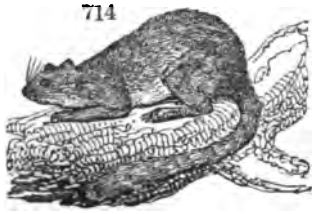
Galo orientalis. Oriental Glutton.
Putorius nudipes. Java Polecat.
Mephites mefiicepa. Telegon Polecat.
Viverra Rasse. Rasse Civet.
Genetta indica. Indian Genett.
Mangusta javanicus. Javanese Ichneumon.
Prionodon gracilis. Slender Genett.
Felis javanensis. Javanese Cat.
Felis undata. Waved Cat.
Felis Diardi. Diard's Cat.
Phalangista rufa. Red Phalanger.
Mus javanus. Javanese Rat.
Mus setifer. Bristle-bearing Rat.

Sciurus Leschenaultii. Jerulang Squirrel.
Sciurus bicolor. Two-coloured Squirrel.
Sciurus bilineatus. Two-rayed Squirrel.
Sciurus nigrovittatus. Black-banded Squirrel.
Sciurus Finlaysonii. Finlayson Squirrel.
Pteromys genibarbis. Bearded Flying Squirrel.
Pteromys nitidus. Bright Flying Squirrel.
Pteromys sagitta. Barbed Flying Squirrel.
Pteromys lepidus. Long-tailed Squirrel.
Lepus nigricollis. Mussel Hare.
Moschus javanicus. Javanese Musk.
Moschus napu. Raffles's Musk.
Moschus Pelandoc. Pelandoc Musk.

The following quadrupeds, from their rarity or singularity, deserve a more detailed notice. The Javanese and ferruginous Tupaia; the Wild Cat of Java, the Long-armed Ape, and the Genett or Coffee Rat. The Two-coloured Squirrel (*fig.* 714.) is a peculiar species confined to this island, where it lives only in the deepest forests: the colour above is brown, but the fur on the under parts is of a golden yellow: it is a great favourite with the natives, who keep it in confinement.

The Javanese Tupay (*Tupaia javanica*), one of the many interesting discoveries of Dr. Horsfield, is an animal peculiar to this island, and constitutes a distinct species from either of those two found in the other Indian islands. It is a small animal, somewhat resembling a squirrel in the gracefulness and agility of its form, no less than in carrying its broad tail, like a plume, on the back. The fur is thick-set, close, and clothed at the base with a soft down; that on the under parts being remarkably delicate and silky: the colour above is brown, variegated with gray, having a regular narrow streak extending from the neck, over the shoulder: the lower parts are dirty white. This appears to be a rare, or at least a very local animal; as Dr. Horsfield met with only two individuals in the extensive and almost inaccessible forests of Blambangan. (Zool. Res., No. 3.)

714



Two-coloured Squirrel.

715

Chestnut Tupay.

The chestnut or ferruginous Tupay (*Tupai Press* of the Malays) (*fig.* 715.), is a singular little animal, possessing all the tameness and sprightliness of the squirrel. The length of the body is about six or eight inches; the tail, which is not quite so long, is like that of a squirrel, except in being rounder. The back and sides are rusty brown, the belly whitish. This is the only species of Tupaia of whose habits and manners we possess any positive information. Sir S. Raffles remarks (Lin. Trans., vol. xiii. p. 257.):—"This lively playful animal I first observed tame in a gentleman's house at Penang, and afterwards found wild at Singapore, and in the woods of Bencoolen: it was suffered to go about at perfect liberty, ranged in freedom over the whole house, and never failed to present himself at the breakfast and dinner table, where he partook of fruit and milk."

The Javanese Wild Cat (*Felis javanensis* C.) is considerably larger than the Bengal Cat, measuring above two feet seven inches, of which eight inches and a half are occupied by the tail. In its shape it exhibits that elevation of the legs, comparative shortness of the tail, and number of grinders (which are only three), which separate these smaller beasts of prey from the more powerful of their congeners; while its small ears, placed much more distant from the eyes, give it an appearance very dissimilar to the domestic cat. The general colour is light grayish brown, nearly white beneath; on the back are four dark brownish stripes, which, although broken, are continued the whole length of the animal; while the oblong spots on the sides are in like manner disposed, with some regularity, in four series: the limbs and tail are similarly marked. The Felis javanensis is met with in all the large forests of Java, concealing itself during the day in hollow trees, but roving about at night, committing depredations on the poultry-yards. Dr. Horsfield tells us, that the natives ascribe to it an uncommon sagacity; asserting that, in order to approach the fowls unsuspected, and to surprise them, it imitates their voice. Its natural fierceness is such as to render it perfectly untameable. Like the wild cat of Europe, it feeds chiefly on small birds and quadrupeds; but when pressed by hunger, it is said to devour even carrion. (Horsf.)

The Long-armed Black Ape (*Simia syndactyla* Horsf.) is upwards of three feet high, of a strong muscular form, and throughout of a jet black colour: it has no tail, but its long arms touch its feet: its peculiar character lies in the fingers being joined together at their base (*fig.* 716.). These apes abound in the forests of Bencoolen, living in large companies, and making the woods echo with their loud and peculiar cry. In captivity they are remarkably tractable.

716

Hand of the Simia Syndactyla.

The Javanese Genett or Viverra (called by the natives Luwak), appears to be a mere variety of the Viverra Musanga (*Raff.*) or the Musang of Mr. Marsden. The usual colour of this animal in Java is light gray, with three distinct stripes along the back, and two paler ones on the sides; the extremity of the tail alone being white. Another variety also occurs where the back is variegated with gray and black, the stripes very obscure, and the limbs and tail nearly black; the latter (as represented in Dr. Horsefield's figure), being without the white tip. This animal, in size and colour, so nearly resembles the Genett, that it was long considered to be the same species. It is abundant near the villages adjoining the large forests; rambling, during the night, in the gardens and plantations in search of fruits of every description, preferring the more delicate and pulpy kinds, and causing much devastation among the pine-apples. Its fondness for coffee is so great, that it is called by many the Coffee Rat. In this repast it likewise shows a very delicate taste; for the little pilferer selects only the ripest and most perfect fruits, the seeds of which, as Dr. H. relates, being discharged unchanged, are eagerly collected by the natives, as the coffee is thus obtained without the tedious process of shelling! Its nest is constructed, like that of the squirrel, in hollow trees. If taken young, it soon becomes gentle and docile, and readily subsists on either animal or vegetable food; the latter is indeed its natural subsistence; but if pressed by hunger it is known to attack fowls and small birds. "The injurious effects," observes Dr. H., "occasioned by the ravages of the Luwak in the coffee plantations, are, however, fully counterbalanced by its propagating the plant in various parts of the forests, and particularly on the declivities of the fertile hills. These spontaneous groves of a valuable fruit, in various parts of the western districts of Java, afford to the natives no inconsiderable harvest, while their accidental discovery surprises and delights the traveller, in the most sequestered parts of the island." (*Horsf. Res.*, No. 1.)

The appearance of the Bats is striking, both from their size, and their strage conformation. The Cheiromeles torquatus, or Tippet Bat (*fig.* 717.), measures, in extent of wing, two feet, having a head not much unlike that of a dog, with a tuft of hair on its toe nails. The head of another species, the Pleropus rostratus, or Long-snouted Bat (*fig.* 718.), resembles that of a greyhound. The animal itself lives in large societies, and feeds entirely upon fruits; hence causing the greatest damage to plantations.

717

Tippet Bat.

718

Long-snouted Bat.

The Ornithology appears more interesting than beautiful, as comparatively few species of Parrots or other richly coloured birds of India are contained in the descriptive catalogue of Dr. Horsefield: little is known of their natural economy, and technical descriptions of colours will not interest the general reader. A glance at some of the most remarkable will, therefore, be sufficient. Near the mountain streams of the interior is seen the rare and delicate Enicurus speciosus, or Crested Wagtail (*fig.* 719.), running on the ground, like the European Wagtail. The deep forests are the favourite resort of two peculiar species of Wild Cock (*Gallus Bankiva* and *javanicus*), and likewise afford a beautiful Peacock, unknown to other parts of India. Dr. Horsefield enumerates ten distinct Pigeons, and eight Woodpeckers, different from those of the continent. The colours of the rare Calyptomena viridis, or the Green Fruit-eater (*fig.* 720.), so exactly harmonise with those of the trees which it frequents, as to render the bird undistinguishable by a near bystander. The Fly-catchers are not numerous; and the Greatbilled Tody (*Eurylamus Horsfieldi*) (*fig.* 721.) is a rare inhabitant. The Javanese Crested Swallow (*Macropteryx longipennis*) is one of the

most elegant of its tribe, and the Pogardus javanensis, or Great Javanese Goatsucker, is particularly rare, even in its native island.

719

Crested Wagtail.

720

Green Fruit-Eater.

721

Great-billed Tody.

Upon the whole, the ornithology of Java may be considered as very rich, since Dr. Horsefield, as the result of his individual researches, furnishes us with a list of 208 native species, and many others have been since discovered by the French naturalists.

The Insects are numerous and splendid, but a long list of names may be dispensed with. Little attention has yet been paid to the marine productions, so that a vast and interesting field for discovery still lies open to the Oriental naturalist.

Sumatra.—The Zoology of this luxuriant island has been partially but ably illustrated by the late Sir Stamford Raffles, who to the wisdom of a statesman united the learning of science, and a thirst for knowledge rarely equalled. The government of India might well be proud of such a man, whose high attainments shone forth in every thing he planned or executed.

The quadrupeds yet discovered are among the most singular of those found in the Indian Archipelago; while the vast unexplored forests of the interior appear to contain others of imposing size, as yet but imperfectly known from the general accounts of the natives. Some idea may be formed of the zoological riches of Sumatra, by the following list of such quadrupeds as are ascertained natives:—

Hylobates syndactyla. Siamang Gibbon.
Hylobates agilis. Active Gibbon.
Presbytis mitrula. Capped Monkey.
Semnopithecus maurus. Negro Monkey.
Semnopithecus melalophus. Simpai Monkey.
Semnopithecus pruinosus. Villous Monkey.
Semnopithecus comatus. Tufted Monkey.
Semnopithecus Estellus. Black-handed Monkey.
Cercopithecus albocinereus. Gray Monkey.

Tupaia Tana. Sumatran Tupaia.
Lutra leptonyx. Javanese Otter.
Canis sumatrensis. Sumatran Dog.
Felis nebulosa. Clouded Tiger.
Felis Sumatrana. Sumatran Cat.
Sciurus affinis. Allied Squirrel.
Sciurus tenuis. Slender Squirrel.
Sciurus insignis. Bokali Squirrel.
Sciurus bivittatus. Two-banded Squirrel.

Hystrix longicauda. Long-tailed Porcupine.
Hystrix fasciculata. Fascicled Porcupine.
Rhinoceros bicornis var. Sumatran Rhinoceros.
Rhinoceros sumatranus. Raffles's Rhinoceros.
Tapirus malayanus. Malay Tapir.
Cervus Rafflesii Sm. Malay Stag.
Cervus Muntjak. Muntjak Doe.
Nemorhedus sumatrensis (*Smith*). Cambeng Antelope.

To these must be added several others, mentioned by the natives, but still unknown to Europeans. "Native information," observes Sir S. Raffles, "gives reason to believe that the Orang Otang exists in the interior of Sumatra. It is frequently confounded with the Orang Kubu and Orang Gubu of Marsden, which, though often the subject of fable and exaggeration, appear to exist on the island as a distinct race of men, almost as hairy and wild as the real Orang Otang." The natives seem acquainted with several sorts of Tigers, equal in size, but different in colour and habits, from that of the Continent, as the Rimau kumbang, or Black Tiger; the Rimau samplat, and others. They further describe another ferocious animal, apparently a kind of Lion. Their Rimau Dahan is said to be the size of a leopard, but darker and less regularly spotted. The king of Acheen assured Sir Stamford, that an animal called Jumbing was found in the eastern parts of his dominions, nearly the size and make of a horse, but having two unequal horns. These notices, from their very imperfection, are calculated to excite the curiosity and stimulate the inquiries of future travellers; at the same time they convey to the general reader some idea of the formidable and imposing animals which still remain hid from science in the primeval forests of India.

A curious little animal, the Tupaia Tana (the Sumatran name, adopted by Sir Stamford Raffles) (*fig.* 722.), is nearly seventeen inches long. In form it bears some resemblance to

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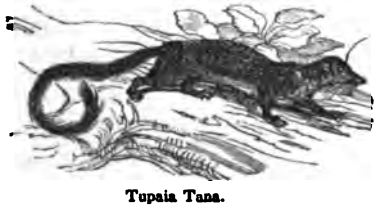


Tupaia Tana.

723

Malay Tapir.

the squirrel, but the snout is narrowed, and proportionably lengthened, like that of a sorex, or shrew-mouse. The fur is soft and delicate, of a dark-brown or blackish colour above, and reddish beneath; the back of the head is marked by a narrow transverse band of black, which forms an obscure crest. The great elongation of the snout places this species as the type of this highly singular genus. The natives affirm it is always found on or near the ground, but its scarcity prevented this account from being verified.

Two distinct species of Rhinoceros inhabit the interior. One of these, the R. sumatranus Raff. has two horns. The other is well known to the natives, but never yet seen by Europeans; they call it Tennu, and describe it as having but one horn, and being marked with a narrow whitish belt encircling the body.

The Malay Tapir (*fig.* 723.), although a quadruped of nearly the first magnitude, is a recent discovery of the late Major Farquhar. It is nearly equal in size to the buffalo; and is particularly distinguished by its colour, the fore and hind parts being glossy black, while the body has a broad and well-defined belt of white, extending circularly round it, resembling a piece of white linen thrown upon the animal. Its disposition is so mild and gentle, that it will become as tame and familiar as a dog.

Of the Domestic animals, Sir Stamford furnishes us with some interesting and authentic information, particularly on the Elephant, Horse, Ox, Dog, and Cat.

Regarding the Elephant, few attempts have been made to catch and domesticate the wild troops, which are extremely numerous in the forests: as at Acheen alone is this animal trained to the service of man. The Sumatran horses are small, strong, and hardy, those of Acheen are the most prized; but the Batta Horses, although larger and stronger, are not so handsome. There is a very fine and peculiar breed of cattle, of a short, compact, and well-made form, without a hump: they are almost without exception of a light fawn colour, relieved with white: they are kept in excellent condition, and are universally used in agriculture. This breed is quite distinct from the Banting of Java and the more eastern islands. Reddish white Buffaloes are common at Bencoolen.

The Dog of Sumatra is wild and untameable; numerous packs inhabit the interior forests, where they hunt in unison. The tail is brushed like that of a fox; the ears short and erect, and the whole conformation resembles that of the Dingo, or Australian dog.

Even the Cats partake of the peculiar interest attached to Sumatran zoology. There is one breed having a knobbed or twisted tail, and another with no tail at all!

On the Birds, our limits compel us to be concise. Vultures are rare on the west coast, but are occasionally seen on the Malay peninsula. Parrots, as in Java, are less numerous than in the more eastern islands, particularly the Moluccas: but six distinct kinds of Hornbill are mentioned by Sir Stamford. Among the Cuckoos is that called the Yellow-billed (*C. xanthorhynchos*) (*fig.* 724.); the throat and upper plumage is of a rich glossy violet, the body being white, with black lines.

724

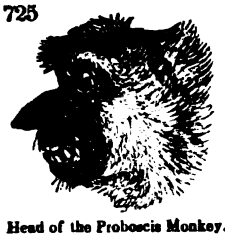
Yellow-billed Cuckoo.

The Doves are of beautiful colours. The magnificent Argus Pheasant, the pride of the Malayan forests, in elegance of form and richness of attire, is, perhaps, unequalled in the feathered race. They are found generally in pairs, in the deep forests of Sumatra, and are said, by the natives, to dance and strut about each other, in the manner of peacocks: four other species of this splendid family inhabit the same situations, besides numerous Thrushes, Warblers, Flycatchers, Barbuts, and other birds whose scientific names have not yet been ascertained. There are, of course, no true Humming birds in India.

Of Serpents, twenty species have been discovered; the most venomous being the well-known Cobra de Capello, or Hooded Snake. Another, much resembling the Coluber mysterizanus, has the terrifying power of suddenly elevating the scales of the neck, and thus producing a variation of colours which disappear when the animal is at rest. The gigantic Pithon, long considered the same as the Boa Constrictor of America, is occasionally met with of an immense size. One sent to England measured eleven feet and a half long; but they are sometimes more than twenty inches in circumference. Crocodiles, as might be expected, are abundant, and often attain to a fearful size.

BORNEO.—The Zoology of this little-known island presents a vast field for future discovery; nor do we believe any region on the face of the earth would furnish more novel, splendid, or extraordinary forms than the unexplored islands in the eastern range of the Indian Archipelago. Ignorance, therefore, compels us to be concise. The forests of Borneo are said to be the principal habitation of the famous Orang Otang (*Simia satyrus*), which is here reported to attain to the human size; while the Pongo Ape, supposed by former writers to be the same, is stated to be considerably larger, and much more powerful. The singular Nasalis larvatus, or Proboscis Monkey, (*fig.* 725.), is distinguished from all others, by having a long and projecting nose, giving to the head of the animal the appearance of a ludicrous mask.

725



Head of the Proboscis Monkey.

The Pongo Ape of Buffon has been proved to be an imaginary animal; but much light has recently been thrown on the nature of another, probably the true Pongo of Baron Wurmb, by an observing naturalist. Dr. Harewood has recently stated the existence in the Hull museum, of a pair of gigantic feet (or hind hands), belonging to some extraordinary ape of this kind. These feet were presented, in 1821, to an individual by the native sultan of Pontiana, in Borneo, "in whose family they had remained, as a great curiosity, during 154 years." Notwithstanding considerable contraction in their circumference over the knuckles, Dr. Harewood found that the middle toes of these feet, when measured from the knuckle, were of the enormous length of seven inches and three quarters. The adult animal must, therefore, have been considerably larger than the largest Orang Otang, described by Dr. Abel, which yet measured seven feet and a half in height. In short, the further details of Dr. Harewood clearly prove that these feet belonged to some enormous ape, truly distinct from any which has yet been recorded; but which, in all probability, still exists in the impenetrable forests of Borneo.

Amboyna.—The Zoology of Amboyna, notwithstanding the old accounts of Valentin, is involved in much obscurity, and even fable. Although the vast botanical labours of the old writers in this island are not only comprehensible, but useful to modern naturalists, we can scarcely assign one quadruped to this immense island as an authenticated native; we once, indeed, received from thence many skulls of the Babyroussa Hog, a highly curious animal, but of which there is no complete specimen in Europe.

The Sus Babyroussa (*fig.* 726.) has much of the manners of the pig: it is said to swim remarkably well, and even to pass, in the Indian Archipelago, from one island to another. The tusks, (*fig.* 727.) are enormous, and appear more like curled horns, rising out of the jaws, than teeth.

726

Sus Babyroussa.

727

Tusks of the Sus Babyroussa.

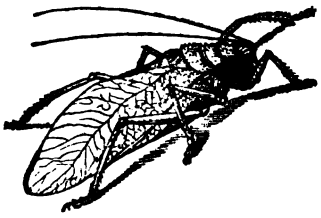
The Conchology appears richer and more splendid than that of any part of India. Here is found the beautiful and rare Rostellaria rectirostris, of which only two perfect specimens are known in British cabinets, one of which we ourselves received from this island. The Paper nautilus grows to an astonishing size. The variety of beautiful Cones, Cowries, Pectens, and other Oriental genera are almost innumerable; and we have been told that the pearl fisheries are not inconsiderable.

The Insects are splendid, and exhibit the most singular forms, and the most surpassing brilliancy of colours. The matchless Amphrisius Priamus *Sw.* (*fig.* 728.), the glory of Oriental entomology, seems a peculiar native of this island; some of the Locusts (as *L. amboinensis* Don.) (*fig.* 729.), are near five inches long, and of a lively citron green colour; while the Mantis siccifolia more resembles a leaf than an insect. Another species, the Giant Mantis (*M. gigas*), exceeds seven inches in length, exclusive of its antennæ. Such are a few of the riches which lie for the most part hidden from scientific research.

728

Amphrisius Priamus.

729



Locust of Amboyna.

Timor.—The Zoology of Timor presents us with several animals which have not yet been discovered in the neighbouring islands. The following list, supplied by the researches of the famous navigator and naturalist Peron, is therefore interesting:—

Rousolphus speoris. Pitnosed Bat.
Rousolphus diadema. Diadem Bat.
Plecotus timoriensis. Timor Bat.

Pteropus griseus. Gray Rousette Bat.
Pteropus amplexicaudatus. Long-tailed Bat.
Pteropus straminous. Lesser Ternate Bat.

Cephalotes Peronii. Peron's Bat.
Cervus Peronii. Timor Stag.

The Rousette Bats, commonly called Vampires, are principally from Timor, where they appear to inhabit either the trunks of trees, or the hollows of rocks; but the larger species retire to the deepest and most obscure caverns. The Timor Stag is but imperfectly known, the head only having been brought to Paris by the French navigators; judging from this, the animal must be rather smaller than the fallow deer.

Timor is proverbial for its innumerable shells and marine productions, which strew the

shores at low water, and present an endless variety of forms and colours. Nor are the land shells insignificant: a most elegant species of Bulimus, banded with buff and purple, is thought to be peculiar to this island.

NEW GUINEA.—The Zoology of New Guinea and its neighbouring islands has long been the astonishment and delight of the naturalist; while its surpassing splendour must awaken corresponding feelings even among the ordinary observers of nature. These regions may, indeed, be termed the Elysium, the earthly Paradise, the fairy-land of the ornithologist; for they have given to the ravished eye forms of such exquisite beauty, that the imagination cannot conceive things more lovely or more gorgeous. Here, in truth, are birds of gold, and of every coloured gem; for in these "spicy islands of the East" are found the whole family of Paradise Birds, literally so called; to describe which both the pen and the pencil become insufficient. Strange, that the most beauteous of nature's works should be assigned to countries whose natives are the most savage and ferocious of the human race!

The native quadrupeds, in such a vast and uncleared island, must be numerous; but so imperfectly are they known, that we can scarcely extend the following meagre list:—

Phalangister papuensis. Papuan Phalanger.	Phalangister chrysorrhos. Yellow-tufted Phalanger.	Cuscus maculatus. Spotted Cuscus.
Phalangister ursina. Bear-like Phalanger.	Sus papuensis. New-Guinea Pig.	Cuscus macrourus. Long-tailed Cuscus.
		Cuscus albus. White Cuscus.

The four latter quadrupeds have just been figured in the splendid atlas of zoological subjects discovered during the short stay of the French expedition at this island, by MM. Garnot and Lesson. The completion of this valuable work, now in course of publication, will put us in possession of those details which we are now obliged to omit.

Many new and highly interesting birds were for the first time discovered by these zealous naturalists: among these may be mentioned, as the most remarkable, the following:—

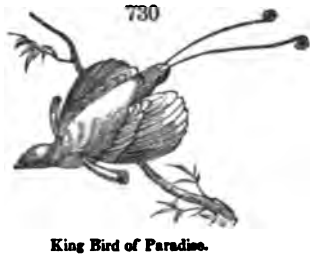
Barita Keraudrenii *Lesson*, of the size of a crow, with the contorted windpipe of a gallinaceous bird: it has a small horn-like crest of pointed feathers over each eye, and its whole plumage is black, with green and blue glossy reflections of metallic brightness. The Whiskered Swift (*Macropteryx mystaceus* Swains.) is nearly the largest of its tribe, being almost double the length of the European swallow: the wings are excessively long. The beautiful Tiger Bittern of New Guinea (*Ardea heliosyla* Lesson) is banded all over with brown, upon a very pale ground; and is the most lovely species of its tribe. To these new acquisitions may be added Megapodius Duperreyi, Eurylamus Blainvillii, Psittacus Desmarestii, Mino Dumontii, Corvus senex, Talegallus Cuvieri, and several small but most superb Flycatchers and Honeysuckers.

The true Paradise Birds (*Paradisidæ* Swains.) deserve a more particular notice. To this magnificent family the following species, described by authors, appear strictly to belong; several others have been named, but they are now referred to distinct families.

Paradisea major. Great Paradise Bird.	Paradisea nigricans. Black-bodied Paradise Bird.	Paradisea superba. Superb Paradise Bird.
Paradisea minor. Smaller Paradise Bird.		Paradisea sexsetacea. Six-shafted Bird.
Paradisea sanguinea. Sanguine Paradise Bird.	Paradisea magnifica. Magnificent Paradise Bird.	Paradisea regia. Royal or King Paradise Bird.
Paradisea nigra. Black Paradise Bird.		

The King Bird of Paradise (*fig.* 730.) is the smallest, not exceeding the size of a starling: it is a much rarer species than the Great Paradise Bird, but, like all those that are supposed to breed in New Guinea, it migrates thence into the small isle of Arua, or Aroo, during the dry monsoons. The upper part of its plumage is a most intense and beautiful red or purplish chestnut: on the breast is a broad gold green zone, and immediately on each side is a bunch of lengthened feathers tipped with the same brilliant colour; there are two long wire-like feathers in the tail, curling round at the ends, where they are emerald green.

730



King Bird of Paradise.

731

Six-shafted Bird of Paradise.

The Six-shafted Paradise Bird (*fig.* 731.) is still more extraordinary: the general colour is velvet-black, but the breast is of the most splendid gold green, changing in different directions of light into every colour of the rainbow: on each side of the head are three long feathers with naked shafts, but tipped with a rich metallic lustre of deep violet purple: the side-feathers of the body are excessively lengthened.

CEYLON.—The Zoology presents some few characters different from those belonging to the continent, and which deserve notice.

The following quadrupeds seem peculiar to this island:—

Cercocebus Silenus. Lion-tailed Baboon.
Cercocebus sinicus. Chinese Monkey.
Stenops gracilis. Slender Loris.
Stenops ceylonicus. Ceylon Loris.
Ve spertilio pictus. Painted Bat.
Sciurus ceylonensis. Ceylon Squirrel.
Moschus Memina. Ceylon Musk.
Cervus unicolor. Ceylon Stag.

The slender Loris (*fig.* 732.), as its name implies, is remarkable for the delicacy of its body and limbs; and is stated to be possessed of great agility and liveliness. The Lion-tailed Monkey is so called from the tail being tufted at its extremity; and there is a white ruff of long hairs on each side of the forehead. It is a rare animal, and has been said to be excessively malicious. The Memina, or Ceylon Musk Deer, has never been found beyond the jungles of this island: it is a pretty animal, about seventeen inches long, grayish-olive above, and white beneath, with the tail very short. The Ceylon Stag is a remarkable and little known species, of which no specimen has yet reached Europe. Major Smith describes it, from the drawings and notes of that excellent artist the late Mr. Daniell, as the largest species on the island, surpassing the European stag in size. It is called by the natives Gona; they describe it as very bold and fierce, and as living only in the deepest forests.

732

Slender Loris.

733

Tailless Cock.

Among the Birds we may notice an extraordinary species of wild cock, called the Tailless Cock (*Gallus ecaudatus* Tem.) (*fig.* 733.), as being destitute of even the rudiments of that member; the comb on the head is not toothed. It seems confined to the deep forests of Ceylon, and to be very wild. There are besides many small birds of elegant plumage, as the Phænicornis malabaricus *Sw.*, Muscipeta paradisea, *&c.*

734

Ceylon Pearl Oyster.

The pearl fishery of Ceylon has long been famous: The shell furnishing this precious gem is the Margarita sinensis? of Dr. Leach (*fig.* 734.). The fishery lasts from February to April. The divers go down by fives, and usually remain under water two minutes; but some have been known to continue four or even five. The shells are all placed in pits, where the fish are left to die and rot before the pearls are searched for; these, as is well known, are morbid concretions formed in the shell by the animal when diseased. The divers are hired, and are either paid in money, or by a portion of Pearl Oysters before they are opened: they generally prefer the latter. Besides the Pearl Oyster, Ceylon is particularly rich in other shells, particularly those called chanks, which are much worn by the Hindoos as rings and ornaments.

Sect. III.—*Historical Geography.*

The condition of these islands, during the classic ages, appears enveloped in impenetrable obscurity. Ptolemy, who shows some knowledge even of China and the continent beyond India, describes indeed some islands scattered through this sea, and, in particular, Jaba-diu, which is probably Java; but his delineation corresponds with the real position and magnitude neither of this nor the other islands. The deficiency is not supplied by any native records.

Considerable revolutions seem to have taken place, about the twelfth century, in the principal of these islands. Hindoo colonies had by this time introduced into Java the religion and literature of Boodh, mixed with that of Brahma, and several powerful empires, ruled by Hindoo sovereigns, were, during this and the following centuries, established in different parts of the island. Among these, Brambanan, Janggolo, and Pajajaran, appear to have been at periods extensive and powerful; but the dynasty of Mojapahit, both from tradition and surviving monuments, must have been extensive beyond all the others, stretching its sway even over part of Sumatra. About the twelfth century, also, the Malays, making an extensive migration from the plain of Menangkabao, in the interior of Sumatra, spread themselves over Malacca, Singapore, and Borneo, and rendered themselves, what they have ever since been, the most conspicuous people in the Archipelago.

The conversion to the Mahometan faith of Sumatra and Java, the two most important and improved of the India islands, made an important change in their political condition. It appears to have taken place, in the former island about the beginning of the fourteenth century; but, in Java, not till about 150 years later. This conversion was effected, not by priests or warriors, but by merchants from Arabia, who had been long attracted to these islands by the commerce in spices. Having settled there in considerable numbers, they at length began propagating their faith, first by persuasion, but, when a number of converts had once been made, they spread it, as usual with the votaries of this faith, by persecution

and the sword. These mercantile apostles became chieftains and princes, and, after a series of bloody struggles, had established in both islands a number of petty kingdoms, in all of which they either ruled or held a considerable influence.

The arrival of the Portuguese by the Cape of Good Hope caused a memorable revolution in the whole Eastern world, and was peculiarly felt by the islands of this archipelago. In 1511, fourteen years after the voyage of Gama, that people conquered Malacca, and in the same year penetrated to Bantam and the Moluccas. They made repeated attempts upon the maritime states in Sumatra; but, these being then vigorously ruled, the invaders were unable to make any permanent impression. Their chief object was to obtain full possession of the Spice Islands, on account of their rich products; but they were encountered by the Spaniards, who had established themselves in the Philippines. After some sharp contests, however, the latter people agreed to waive their claims, in consideration of a payment of 350,000 ducats. The oppressions of the Portuguese roused a general confederacy against them, which was, however, baffled by the heroism of Galvan; and that virtuous governor introduced a conciliatory system, though it was ill supported by his successors.

The Dutch, a new power, who in the course of the sixteenth century sprung up from beneath Spanish oppression, were, after the union of Spain and Portugal, placed in an attitude of regular hostility with both these countries. It was only, however, by timid and cautious steps that attempts were made to dispute Spanish supremacy in the Indian seas. But the maritime power of Holland continually increased, while that of her antagonists diminished, so that she at length first contended on equal terms, and then gained the superiority. Her ambition was peculiarly attracted by the Indian islands, and she successively drove her antagonists from all the positions which they had occupied. Soon she herself had to contend with a new rival, the English, who, under Lancaster, Middleton, and other bold navigators, made strong efforts to obtain settlements in these islands, and a share in the spice trade. A most violent series of rivalry, plunder, and piracy was for many years carried on between these two great maritime states, in the course of which the Dutch were impelled to that bloody transaction, the massacre of Amboyna. A treaty was at length concluded, on the principle of mutual equality and compensation; but since that time, the attention of the English company has been almost wholly engrossed by their vast acquisitions on the continent of India, while the Dutch, continuing to devote themselves to their insular possessions, have acquired there a decided preponderance. This was, indeed, suspended during the last war; when England by her superior navy obtained possession of all the principal islands; but, at the peace, which rescued her ancient ally from the thraldom of Napoleon, she, with a generosity which has been considered excessive, restored all the captured settlements. By a convention, in 1825, she even exchanged her possessions in Sumatra for Malacca, which was valuable to her from its connecting together Singapore and Prince of Wales's Island.

SECT. IV.—*Political Geography.*

The political constitution of these states is mostly simple, and even rude. There are some wandering tribes, in the infancy of society, who present scarcely any vestige of law or subordination. In general, however, the system of village republics, the affairs of which are conducted by elective and sometimes hereditary officers, prevails here, as throughout the continent of India. These little associations, however, are oppressively domineered over, sometimes by a feudal aristocracy, sometimes by princes almost completely despotic. The aristocratic system prevails chiefly among the states less advanced in civilisation; Celebes, Sooloo, and part of Sumatra. Here the chiefs, having reduced the body of the people to a state of almost complete vassalage, unite in a species of confederacy, electing a king or head, rather as a servant than a master, to carry on their general concerns. They have also elective councils, consisting in Boni of seven, in Wajo of forty officers, who have not only the command of the public treasure, but the decision of the questions of peace or war. Among the Goa Macassars, there is a very extraordinary officer, who has the power of removing the king, and calling upon the council to elect another. In Java, on the contrary, and others of the more advanced districts, the sway of the sovereign is entire and undisputed; and the subjects vie with each other in indications of the most abject submission. They approach him creeping on all-fours, and retire in the same humiliating attitude: to stand upright before him is considered an insult. The "royal feet," or "the royal slave," are the appellations by which they designate themselves when addressing him. He is loaded with the most extravagant flattery: his eyes are two gems; his face is the sun. Yet, even under these regular despotisms, the body of the people are less oppressed than where the feudal aristocracy prevails. Personal slavery is unknown in them, and even the village governments enjoy a greater share of independence. In all these states, however, there are two orders of nobles, out of which the higher and the lower classes of public officers are respectively chosen. Slavery is often produced by war, and Mr. Crawfurd mentions 10,000 Bugis at one time held in bondage by the Macassar nation, and employed in public works, without distinction of rank. Debt is another source either of temporary or perpetual slavery; and the atrocious practice of kidnapping is by no means unfrequent.

The Dutch claim, in a certain sense, the sovereignty of all these islands except the Philippines. In fact, they hold the leading positions in a state of military occupation, and generally triumph in contests with the natives. Their sway is neither mild nor popular. Oppressive exactions, commercial monopolies, and sometimes bloody severities, have rendered their yoke odious, and given rise to violent insurrections. They appear also never to have made any effective efforts to improve and civilise the people; and have not followed up the attempts made by Britain for this purpose during her temporary sway. Under the late administration of Van Capellen, however, some improvements took place.

The Spaniards, whose colonial system has been generally considered the worst of any, have administered the Philippines in a manner decidedly better, and more salutary. They have established a mild control over the natives, who, when the power of their European masters was in danger, have even taken up arms in their defence. This improvement has been in a great measure effected through the missionaries, who, without any violent means, have converted and gained the attachment of the people. Still, little has been done to develope the vast natural capacities of these fine islands.

Sect. V.—*Productive Industry.*

As to soil and climate, the Indian islands rank with the most favoured regions on the globe. Situated almost immediately beneath the equator, and beat by the sun's intensest rays, they must, had moisture been deficient, have been converted into arid and sandy deserts. But the vicinity of the sea, their varied surface, and the lofty mountains that traverse their interior, afford a copious supply of waters, which, combined with the heat, produce the utmost luxuriance of vegetation. They yield in abundance not only all the ordinary products of a tropical region, but also peculiar and exquisite spices and fruits, which cannot be transplanted with advantage into any other soil. The Archipelago, according to Mr. Crawfurd, may, as to climate and productions, be divided into five parts, of different character, yet these appear to us all reducible to two, modified by, and passing into, each other. These are, the eastern and western, bordering, one on the Pacific, and the other on the Indian Ocean, and exposed to the respective monsoons which blow from these vast seas. The western quarter is more fruitful in the staple and useful productions of the soil; rice is raised in abundance, and forms the food of the great body of the people; noble forests of teak and other valuable timber cover the plains; but the finer spices are not raised in any perfection, and even its pepper is inferior to that of Malabar. The eastern islands, on the contrary, are less fitted for the production of rice or of any grain; the subsistence of the inhabitants is derived from the pith of the sago tree, a mode of support unknown to any other great nation; but they contain the native country of the clove and the nutmeg, the finest of aromatics. The Philippines, however, notwithstanding their easterly position, agree rather with the opposite quarter, being fruitful, not in spices, but in rice, sugar, and tobacco.

Agricultural operations, even in the most improved of these islands, are extremely simple. A team is estimated by Mr. Crawfurd to cost 2*l.* 18*s.* 6*d.*; of which the plough is 2*s.* and the harrow 1*s.*, the chief expense being the pair of buffaloes, which are worth 2*l.* 10*s.* Irrigation is the most costly process; it is not effected by those extensive tanks which diffuse fertility over Hindostan, but by damning up the streams as they descend from the mountains, and distributing them over the fields; and for this purpose the slopes of the hills are often formed into terraces. As the raising of rice by artificial irrigation does not depend upon the seasons, it is often seen, within the compass of a few acres, in every state of progress. "In one little field, or rather compartment, the husbandman is ploughing or harrowing; in a second, he is sowing; in a third, transplanting; in a fourth, the grain is beginning to flower; in a fifth, it is yellow; and in a sixth, the women, children, and old men are busy reaping." When ripe, the head is cut off with a species of sickle, with only a few inches of the straw; it is then dried, and carried to market in the ear. Maize, like oats and barley in Europe, is raised for the use of the lower ranks. The yam, though indigenous, is not much valued, the sweet potato being preferred. The grains of Europe and the common potato are produced only in small quantities. The cocoa-nut, the ground pistachio, the palma Christi, and sesamum are largely cultivated for the production of oil, a favourite food among the islanders.

The sago palm is a production peculiar to part of this region, growing chiefly under the most boisterous influence of the eastern monsoon. It is only thirty feet high, but so thick that a man with outstretched arms can with difficulty embrace it. It is reared only in marshes, so that a plantation forms a bog knee-deep. The sago is considered ripe in fifteen years, and is then cut into segments, and the pith extracted, which soon dries into a farinaceous powder, eaten either in the form of cakes, or of a species of pap. The produce is prodigious, 500 or 600 pounds being often drawn from a single tree, and one acre may, it is supposed, yield 8000 lbs. annually.

Spices, however, form the production of those islands most peculiar and most valued by foreigners. These, with the coffee tree recently introduced, occupy in agriculture the same

place which the vine does in Europe, being generally cultivated in the hilly districts of each country. Pepper grows plentifully in its western districts; but Mr. Crawfurd considers it as introduced from the hills of Malabar, whose produce continues still superior. It is best raised, also, not on the rich plains of Java, but on the hilly districts of Sumatra and Borneo. The clove has, perhaps, the most limited geographical distribution of any plant, being confined originally to the five small Molucca islands, whence it has been transplanted to Amboyna, to which the Dutch have sought to confine it. The tree is of beautiful form, about the size of the cherry, bears fruit at a period between seven and ten years, and has an average duration of 75 years, though sometimes it has lasted for 100, or even 130. The fruit is first green, then a pale yellow, and lastly blood red, when it is ripe; and, being gathered, is dried upon hurdles, and then acquires the black colour which we see it bear. Some trees have been known remarkably productive, and one is even asserted to have borne 1100 lbs. in one year; but Mr. Crawfurd does not consider the annual average to exceed 5 lbs., and the produce of an acre 328 lbs. The nutmeg is much more widely distributed, being found of good flavour in all the Spice Islands, and even on the coast of New Guinea; but the Dutch have sought with tolerable success to extirpate it everywhere, unless in three of the Banda islands. The tree grows to the height of forty or fifty feet, somewhat resembles the clove, and has nearly the same duration. The fruit, also, is prepared in a manner somewhat similar, though requiring greater care, and with the additional operation of stripping off the mace, which merely requires to be dried in the sun. One tree produces, in mace and nutmegs together, nearly ten or twelve pounds; but, from the distance at which they must be planted, the average of an acre does not exceed 266 lbs.

Among other products of these islands may be mentioned the sugar-cane, which is indigenous, but is eaten by the natives merely as an esculent vegetable; the Chinese express the juice in the form of clayed sugar. Indigo is indigenous, of excellent quality, but ill prepared for use. Coffee has been introduced from Arabia, and cultivated to a considerable extent in Java. Cardamoms and gum benzoin, the Eastern frankincense, are articles of some importance.

Forests, in extraordinary luxuriance, cover a great extent of the Indian islands. The teak, so remarkable for its strength and durability, flourishes only in the rich soils of Java, and there not to the same extent as in Malabar and the Birman empire. There are also a considerable number of ornamental woods, and of others, from which precious gums distil. Bamboos and rattans overspread the whole country wherever not rooted out by cultivation; they serve for building, for cordage, and other important purposes. The mangoostan and the durion are generally considered the most delicate fruits produced in any quarter of the world; though, in the latter, the stranger must overcome the aversion inspired by its unpleasant scent.

The mineral wealth of the Archipelago is brilliant and valuable. The lead is taken by gold and diamonds, the most splendid productions of this kingdom of nature. Of the former, these islands, next to South America and Central Africa, contain the most extensive deposit on the globe. It is found chiefly in the south-western islands, whose rocks are mostly composed of primitive strata; and its central position is in Borneo and the adjacent parts of Sumatra. In the fertile volcanic range reaching from Java to Timor inclusive, the quantity is too small to be of any commercial importance. It is found in veins and mineral beds, in the sand of rivers and streamlets, and deposited in alluvial lands. From the first it is drawn only by the Malays and others of the more civilised tribes in the interior of Sumatra. They employ, however, very rude tools, and effect only slight excavations, clearing the mine of water by buckets and manual labour. Yet there are said by Mr. Marsden to be no less than 1200 of these petty mines in the single district of Menangkabao. The sand of the rivers is searched only by the more savage tribes; but the drawing of gold from alluvial deposits, carried on almost entirely by Chinese settlers in the island of Borneo, is by much the most copious source from which the metal is supplied. The mines are situated chiefly at about two days of inland navigation from the western coast, towards the foot of the mountains. The Chinese colony, according to Mr. Crawfurd, consists of 36,000, of whom only 6000 are employed directly in the working of the mines, the rest in branches of industry subservient to it. There are said to be, in the principal district, thirteen large and fifty-seven small mines; of which, the former employ from 100 to 200, the latter from ten to fifty men. The excavations are longitudinal, and the golden earth drawn from them is put into a trough, and a stream of water passed over it, while it is agitated by a hoe, until the metallic grains separate. Mr. Crawfurd reckons the annual value of the gold of the Archipelago at 658,000*l*., which is more than a fourth of that of the mines of America in their most prosperous state, and four times that of all the European mines. Of this amount, 375,500*l*. is from Borneo, 131,600*l*. from Sumatra; the rest is the estimated produce of all the other parts of the Archipelago.

The diamond is found only in Borneo; being confined to that island, to Hindostan, and to Brazil. The Indian islanders prize highly this stone, and cut it with skill chiefly into the table form; but it is not valued by the Chinese, whose industry might otherwise have im-

proved the rude processes employed in extracting it by the Dayaks, or aboriginal savages. Almost the largest diamond in the world is in possession of one of the princes of Matan in Borneo. It weighs, in its present rough state, 367 carats; which, by the process of cutting, would be reduced to one half; consequently, it is not quite so large as that purchased by the Empress Catherine, which, when cut, weighed 193 carats; but it considerably exceeds the Pitt diamond, which was only 137 carats. Its value, according to the principles established by diamond-dealers, is 269,000*l*., though it might be very difficult at such a price to find a purchaser.

Of other metals, tin is a rare one of considerable use, and, though discovered in these islands only about the beginning of last century, has become an important and characteristic production. It exists in various parts of the Malay peninsula and of the islands between it and Java; but in none of these is it worked to any extent unless in the small island of Banca, near the eastern coast of Sumatra, which, in Mr. Crawfurd's conception, is almost entirely filled with this metal, in the form either of veins or of alluvial deposits. The latter, on account of the facility of working, is almost exclusively resorted to. The process is, first to cut down a portion of that vast primeval forest with which nearly the whole island is covered; then to remove the alluvial strata in order to reach the ore, which is then washed in a manner similar to gold, and smelted by machinery, simple though not unskilful. About the middle of the last century, the mines yielded 3870 tons, being nearly as much as those of Cornwall. Anarchy, mismanagement, and other causes, had reduced them, previous to the British conquest in 1813, to less than a sixth of the above amount; but in 1817 they rose to 2083 tons, about half the produce of Cornwall. Nothing can more strongly prove the effects of skill and machinery, since "Cornish tin is obtained with vast labour, by mining through obdurate granite, often to the prodigious depth of many hundred fathoms; Banca tin, by digging through a few soft strata of sand and clay, and seldom to more than three or four fathoms." The produce has since continued nearly the same, being two-thirds of that of all the mines in the Malay peninsula. Like gold, tin is worked chiefly by the industry of Chinese settlers. Copper is found and worked in several of the islands, particularly Sumatra, though not to any very important extent. Iron is scarce, and occurs in considerable quantity only in the small and rocky island of Billiton. No silver mines of any value have yet been discovered. Sulphur is found abundant and pure on the volcanic mountains of Java; but the transportation to the coast is difficult. Salt, in favourable situations, is easily produced through the evaporation of sea water by the heat of the sun.

Fishery is pursued by the islanders with considerable activity; and its produce, used generally in a dried state, forms a considerable article of food and internal commerce. Important objects of exportation are afforded by certain gelatinous marine productions, of a singular character, which bear a high price in the markets of China. Such are sharks' fins, and above all the tripang, sea slug, or biche de mer, an ugly shapeless substance, of a dirty brown colour, with scarcely any appearance of life or motion. It is found chiefly on coral shores to the eastward of Celebes, including those of New Guinea and Australia. The chief market is at Macassar, whence upwards of 8000 cwt. are annually sent to China, where it brings from six to ninety Spanish dollars per cwt. The Chinese, who imagine it possessed of some peculiar nutritive and stimulating qualities, divide it into no less than thirty different species, the various qualities of which are understood only by themselves. Here, too, for the want of a more appropriate place, we may notice that kind of edible birds'-nests which forms a similar fantastic luxury. These nests are the produce of a peculiar species of swallow (Hirundo esculenta), which, by some process not fully understood, constructs its nest, not of the usual materials of hair, straw, and feathers, but of a substance resembling a fibrous ill-concocted isinglass. They are found in the deep damp caves of solitary rocks, at a distance from any human habitation, and chiefly, though not always, on the sea-shore. The adventurer often, by ladders of bamboo or rattan, descends the face of perpendicular cliffs, till he reaches the mouth of the cavern, and must frequently enter it by torchlight over slippery fragments of rock, where a false step would be instantly fatal. According to the nice distinctions made by the Chinese, the value of these nests varies from 2*l*. to nearly 7*l*. per lb.; at which last price they are equal to about double their weight in silver.

Commerce, among the nations of this archipelago, has always been carried on with considerable activity. Their country yielded valuable materials, and the insular positions and great variety of seas and coasts afforded ample opportunities. At the time of the first discovery by Europeans, the three most civilised tribes, the Javanese, the Malays, and Bugis, carried on a very active traffic. That of the first two has been in a great measure crushed by European dominion and rivalry. The Bugis, however, who have remained in a great degree independent, are still active traders throughout all these seas. The Chinese, again, under the protection, as Mr. Crawfurd conceives, of the regular order established by the European governments, have formed extensive colonies, and carry on a constant intercourse by means of their huge junks, some of 600 tons' burden, but so unwieldy that they can only make one annual voyage to Batavia. They furnish to the islanders tea, cotton stuffs, and porcelain, all somewhat coarse; receiving in return tripang, birds'-nests, sharks' fins, tortoise-

shell, spices, and various minor articles. The tonnage employed by the Chinese and native states is together estimated at 30,000. The trade with Europe is carried on chiefly through the Dutch capital of Batavia, and the British settlement of Singapore. The exports to Europe consist mostly of spices, pepper, cloves, nutmeg, mace, with camphor, rattans, tortoise-shell, &c. The imports are cotton manufactures, particularly chintzes of moderate fineness, and of red, green, and other bright colours, with running-flowered patterns; also white cottons, cambrics, imitation bandana handkerchiefs, and velvets. Notwithstanding the tropical situation of these islands, the mountains which diversify them, and the influence of the sea-breezes, cause a considerable demand for woollens, which should be the light cheap cloths of Yorkshire, with gaudy patterns. Glass-ware, mirrors, lustres, and common earthenware, at low prices, find a good market.

Interior commerce is carried on with considerable activity along the rivers and creeks, which, though not generally of long course, are extremely numerous, descending from the inland mountain barriers. The roads are mere footpaths, unfit for a wagon of any description, and the commodities are conveyed on the backs sometimes of animals, but more frequently of men. On one much frequented road, in Java, no less than 5000 porters are said to be constantly employed.

SECT. VI.—*Civil and Social State.*

The population of none of these islands has been ascertained by any species of census, except Java and the Philippines. Java has been found to contain about 6,000,000, and the Philippines about 2,500,000 people. In the rest of the Archipelago, a judgment can only be formed, by considering their extent, in combination with the apparent density with which they are occupied. An estimate has been communicated to us by Mr. Crawfurd, the historian of the Archipelago; and though it differs somewhat from those usually formed, yet the extensive opportunities of observation enjoyed, and ably employed, by that gentleman, lead us to believe that it will make a nearer approach to the truth than any hitherto published. He supposes Sumatra to contain 2,500,000; Borneo, 500,000; Celebes and its appendages, 1,000,000; Bally, Lombok, Sooloo, &c., 500,000; the Spice Islands, Timor, &c., nearly 500,000. The entire amount will thus be 13,500,000.

The people of the Indian archipelago are divided into two races, distinct in origin, language, aspect, and character, and irreconcilably hostile to each other; the *brown* and the *black* races. They bear the same analogy that the white and the negro bear in the western regions; the former, superior in intelligence and power, driving the other before him, oppressing and reducing him to bondage. Thus, in all the great islands the brown race has now established a decided and undisputed superiority.

The black race, called often the Papuas or Oriental Negroes, appear to be a dwarf variety of the negro of Africa. They are of low stature and feeble frame. Mr. Crawfurd never saw one who exceeded five feet. The colour is sooty rather than black, the woolly hair grows in small tufts, with a spiral twist. The forehead is higher, the nose more projecting, the upper lip longer and more prominent. The under lip is protruded, and forms indeed the lower part of the face, which has scarcely the vestige of a chin. This degraded class of human beings is generally diffused through New Guinea, New Holland, and other large islands of the Pacific. Their habits have been very little observed, Europeans having only had occasional individuals presented to them as objects of curiosity. Little is recorded except the ferocity with which they wage their ceaseless war with the brown races, who have driven them from all the finer parts of this region; but, if we may believe Mr. Hunt, the wrongs by which this hostility has been provoked are of the most aggravated description.

The brown tribes differ essentially in their appearance from any others in southern Asia. They are short, squat, and robust, being reckoned on an average four inches lower than the European standard. There are considerable varieties of colour, which Mr. Crawfurd thinks cannot be accounted for by the climate; though, perhaps, he does not sufficiently allow for the change produced by elevated sites. The tint of virgin gold is considered the standard of beauty, which the poets ascribe to the damsels whose praises they celebrate. These islanders are rather an ugly race; their frame is deficient in symmetry, their lower limbs large and heavy. The face is round; the mouth wide, but with fine teeth; the cheek-bones high, the nose short and small; the eyes are small, and always black. The hair is long, lank, harsh, always black, and, except on the head, extremely deficient; so that the Mahometan priests vainly attempt to attain any portion of that venerable aspect which an ample beard is supposed to confer.

This part of the population, by far the most numerous and important, appears the most uncivilised of all the great nations who inhabit the south of Asia. Some seem justly charged with cannibalism, the most dreadful atrocity of which human nature is capable. Yet this original rudeness is mingled with features characteristic of the most highly civilised people in Asia, the Arabs, Hindoos, and Chinese, who entered for purposes either of commerce or colonisation. The Javanese and Malays, the principal of these tribes, are destitute of the polished and courteous address which distinguishes the Hindoo and the commercial Arab.

When they wish, as they often do, to be obsequious courtiers, they act their part with a bad grace. In return, they are comparatively frank and honest; and much greater reliance can be placed on their word. They show also sympathy in the distresses of their fellow-creatures, and will exert themselves to relieve them, on occasions when the Hindoo manifests a callous indifference. Strong attachment is often displayed to their family, their kindred, and their chief. Though generally subject to a power more or less despotic, they retain strong and even lofty feelings of personal independence. Each man goes armed with a kris or dagger, which he regards as the instrument both of defending himself and avenging his wrongs. The right of private revenge is claimed by every individual for injuries received either by himself, his family, or tribe. When circumstances deprive him of any hope of avenging himself with ease or safety, he has recourse to that dreadful outrage, peculiar to these islanders, termed running amok, or a muck. The individual under this impulse draws his dagger, and runs through the house, or into the street, stabbing without distinction every one he meets, till he himself is killed or taken. This movement is always perfectly sudden, indicated by no previous looks or gestures, and from motives which it is often difficult to discover. The police officers, in contemplation of these violences, are provided with certain forked instruments, with which they arrest and secure the offender. A predatory disposition, exercised especially upon strangers, is shared by these islanders with all the uncivilised tribes of Asia; but while the Arabs and Tartars carry on their depredations by land, the Malays, inhabiting the shores of straits and narrow seas, through which rich fleets are perpetually passing, have become notorious for piratical exploits, which are practised with peculiar activity on the coast of Borneo, and in the islands of the Sooloo Archipelago.

The religious belief and observances of the East Indian islanders, at least of the most civilised portion, have been almost exclusively derived from the great nations in the south of Asia. The first great and effective colony appears to have come from Telingana in southern India; and the creed which they introduced, though now nearly obliterated, is still attested by the remains of splendid temples and by numberless images scattered throughout the island of Java. From them we discover that here, as in all the countries around India, the prevailing worship has been that of Boodh. His images, of which the principal one in the temple of Boro Budor is shown in the annexed cut (*fig.* 735.), are much the most numerous. Those of Siva and the deities connected with him are by no means unfrequent; but few or no representations have been found of Brahma or Vishnu. This system, once so widely diffused, scarcely survives, unless upon the small island of Bali, which adjoins to Java, but is rendered almost inaccessible by its entire want of harbour. Here the Hindoo institutions flourish in full vigour, and the worship of Siva is much more prevalent than that of Boodh; the distribution into four castes is fully established; and the same merit is attached to abstinence from animal food, though it is scarcely practised, unless by the priests. The sacrifice of widows takes place on a great scale, chiefly at the death of any of the great men; and the extent of the practice of polygamy renders its effects there very tragical. Mr. Crawfurd plausibly suspects it to be not wholly imported from Hindostan, but to be a remnant of the custom general in savage communities, where the chiefs enjoy extraordinary influence.

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Representation of Boodh.

The Mahometan creed, introduced from Arabia nearly four centuries ago, completely supplanted the Hindoo system among the Javanese and Malays. By this channel it came in the form deemed orthodox, and there has never been any mixture of sects. The practice here, however, is exceedingly lax; and it is allowed very little to interfere with the ordinary occupations and enjoyments of its votaries. They hold the festivals with considerable zeal, practise some measure of prayer and fasting, and set high value on performing the pilgrimage to Mecca. But they pay little regard to the prohibition of wine and other intoxicating liquors, and by no means immure their females with that jealous rigour which is usual among Mahometan nations. Seclusion takes place only among the great; and even they, instead of being offended by enquiries after their wives, consider it as a compliment, and usually introduce them personally to gentlemen with whom they have become intimately acquainted.

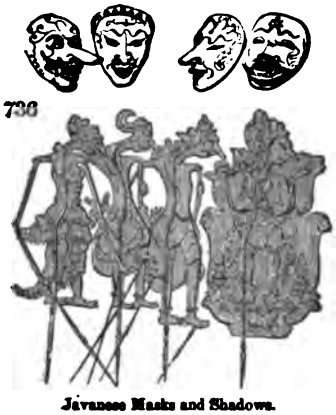
After the arrival of the Portuguese, the Christian nations soon became the ruling powers in the Indian archipelago. The only extensive conversion, however, has been that effected by the Spaniards in the Philippine islands; of which Luconia, the principal one, has, through the efforts of the missionaries, become almost entirely Christian; and though their instruction

has not been conveyed in the most enlightened form, it is generally allowed to have effected a very important improvement upon the rude natives. The Dutch colonists, inspired by a spirit almost entirely commercial, have not made the same exertions, and their monopolising and tyrannical spirit was little calculated to recommend their belief.

The intellectual character of the Javanese ranks lower than that of almost any other people who have made equal progress in the external accommodations of life; and their literature, like their religion, is almost entirely imported from Southern Asia. "In the Javanese schools," says Mr. Crawfurd, "a smattering of Arabic, with a religious view, is the only branch of instruction. Javanese literature itself is nowhere taught as a branch of education, but left to be picked up as occasion offers. Its acquisition seems not to be considered as a thing of utility or necessity, but rather as an accomplishment which it may be agreeable to possess, but which it is no discredit to be ignorant of. I have seen many a chief of rank who could neither read nor write; and out of the whole population of an extensive village, you cannot always be sure that you can find an individual that can do so. As far as concerns the women, literary education may be said to be altogether unknown. When one is seen that can read and write, she is looked upon as a wonder. I do not think that, during my extensive intercourse with the Javanese, I saw half a dozen that could do so. The palace of the sultan of Java afforded but a single example." Both the Malay and Javanese languages are uncommonly copious; but it is in a superfluous profusion of terms to express individual objects, while there is a total absence of those relating to general and abstract ideas. The dialects, especially the Malay, are distinguished by the prevalence of the smoothest liquid and vocalic sounds, and the exclusion of all harsh consonants. The Malay, in adopting a large portion of Arabic, has smoothed it down so as to harmonise with the original; and, being written in Arabic characters, which are considered sacred throughout the East, has acquired a general currency among the people of the Archipelago. The language of the Javanese, on the contrary, has an alphabet of its own, the characters of which are peculiarly neat, though seldom carefully written. This people have also a learned and sacred language, called Kawi, which, from the large infusion of Sanscrit, appears evidently to be derived from India, and is employed chiefly in abridgments of the Mahabarat, Ramayana, and other Hindoo compositions. The literature of Java is almost entirely metrical, yet does not display those high efforts of fancy and passion which often distinguish the effusions of a ruder people. According to a late author, they contain neither sublimity, pathos, tenderness, nor humour; but, on the contrary, bombast, puerility, or utter inanity. History was unknown previous to the introduction of the Arabic religion and literature, since which time there has been a tolerably connected narrative of public events; yet the imperfection of this may be estimated when we state, that it is always composed under the eye of the prince whose actions it records, and who employs the writer merely as a servant whose only qualification is that of being able to string events into verse. Malay literature is chiefly in prose; and its largest portion consists in romances, or fragments of real story so disfigured as to be little better. They have the same tame character with the works composed in its brother dialect. The best compositions in both seem to be little songs, the effusions of natural feeling.—Celebes has a language and literature of its own; ruder, though in some respects more energetic, than the Javanese or Malay.

Dramatic entertainments, of a very peculiar nature, are cultivated with ardour, particularly in Java. They seem to be only a step beyond the practice of common story-telling, which is so general throughout the East. The dalang, or leading personage, sits in front of the stage, and reads in a chanting tone one of the national romances. The performers behind, covered usually with grotesque masks (*fig.* 736.) accompany his recital with corresponding movements. Their place is frequently supplied by puppets, many of which are of that very peculiar description called scenic shadows,—monstrous and grotesque figures, of about twenty inches long, cut out of a stiff untanned buffalo hide, and commonly very highly gilded and painted.

736



Javanese Masks and Shadows.

Of ruder amusements the chase is pursued with ardour by the natives of Celebes on their large grassy plains, with small active horses, lightly harnessed, which they ride with great swiftness. This diversion is carried on with much less ardour in Java, and only in its unimproved districts; the natives possessing an inferior breed of horses, which they ride ill. Their most active chase consists in attacking the tiger by a circle of spearmen, while the prince often looks on as a spectator. The islanders in general are not fond of games where much bodily exertion is requisite, and take more pleasure in

sitting and contemplating the combats between pugnacious animals. Cock-fighting is a universal passion; the quality and exploits of game-cocks are celebrated in their poems and romances. They delight also to view the conflict between the tiger and buffalo, an arduous and equal struggle, in which, contrary to what might be expected, the buffalo is generally victorious. They take pleasure also in quail-fighting, and even in contests among a peculiar species of crickets. Games of hazard are also pursued with passion, even the lower orders squandering their hard-earned wages, and reducing themselves to destitution, by an excessive indulgence in them. This has suggested a singular expedient to those who employ Javanese to watch during the night over valuable property, and seek to overcome their almost irresistible propensity to forget their charge and fall asleep: a small sum given to them to gamble for completely secures their vigils. Dancing is also a favourite amusement, or rather occupation: it is solemn, stately, and slow, performed less with the legs than with the body and arms, and expressing feeling and passion rather than gaiety. The Javanese prince not only trains his concubines to dance, but causes them to exhibit in public. The messenger or ambassador, who approaches the royal presence, enters and retires dancing. In this position is taken the vow of friendship or of enmity, and even he who, in the extremity of despair, terminates life running a muck, performs this frantic deed in measured postures and movements.

The habitations of the East Indian islanders are of very simple materials and construction. The art, by which those magnificent structures were reared, the remains of which adorn the interior of Java, is entirely lost. They appear to have been constructed by the Hindoo settlers, and to have departed with them. The humble and mercantile character of the adventurers who introduced the Moslem faith is the supposed cause why the mosques, instead of the splendour which they display in other parts of the Mahometan world, are here coarsely and inelegantly constructed of temporary materials. The natives have lost even the art of turning an arch. Their very best houses are slight structures of bamboo, rattan, palmetto leaf, and grass. Those of the peasantry (*fig.* 737.), simply constructed of these materials, and surrounded with trees and a little garden, produce a very pleasing effect. Those of the higher classes are called pandapas (*fig.* 738.), and consist chiefly of a roof supported by four pillars, both often highly carved and painted. The public halls of the towns, the mosques, and even the monarch's state hall of audience, consist only of such structures on a greater scale. To make one the commodious

737

Malay House.

738

A Pandapa.

739

House of a Chief.

residence of a chief, it is enclosed by palings, or divided into apartments, by light partitions (*fig.* 739.). The abodes of the great chiefs, and even the palace of the prince, are only distinguished by the greater number and size of these pandapas. The palace, however, is enclosed by walls, composed formerly of hewn stone, but at present only of bad brick, yet which form the only structures of masonry now reared in the country.

The dress of these islanders presents a medium, not very commodious or elegant, between the light close garments of the European, and the long flowing robes of the Asiatic. The principal part is the sarung, or long robe, not fastened to the body, but loosely wrapped round the lower part, and fastened by a zone or sash. The coat, the other principal part of the dress, is only a loose frock. The Mahometans wear a cap resembling a turban; but the other inhabitants have the head naked (*fig.* 740.). The rest of the body is either uncovered, or enveloped in vest, boddice, or pantaloons, according to the taste of different tribes. In the court dress, on the contrary, all the upper part of the body is naked, smeared with a yellow cosmetic, and loaded with gold ornaments (*fig.* 741.). In the war dress, again, the coat, indeed, is laid aside; but the robe is wrapped close round the whole body; while besides the kris, or dagger, which is worn at all times, by every islander, a sword is stuck in the belt, and a long spear is brandished (*fig.* 742.).

The diet of the islanders is simple, consisting chiefly of rice and fish, with little mixture of other animal food. It is eaten greedily, with little ceremony, and lifted to the mouth by

the hands, according to the general practice of the East. The people display a remarkable propensity to the use of narcotic stimulants. Wine and still more the spirits of their own manufacture, are liberally used, in defiance of Mahometan injunction; yet it is not in these that the chief excess is committed. It is in *bang*, a substance extracted from hemp; in tobacco, and of late above all in opium. The islanders, reversing the general practice of Asia, chew tobacco, and smoke opium.

740

Java Common Dress.

741

Java Court Dress.

742

Java War Dress

SECT. VII.—*Local Geography.*

The local details of this extensive range of islands, especially as respects their interior districts, are in many respects imperfectly known, and many of them not very interesting; so that they will not detain us so long as the general description. We shall begin with the western islands, and proceed eastward.

Sumatra, the most westerly of the great islands, extends from north-west to south-east, above 1000 miles in length, and 160 of average breadth. It is situated immediately beneath the equator, which divides it into two nearly equal parts; yet it is protected from the evils incident to this position by chains of mountains, which extend along the whole of the interior, sometimes in several successive ranges, enclosing between them fine valleys and lakes. Of these Goonong-Pasama, which Europeans, upon a very crude theory, have called Mount Ophir, exceeds 13,800 feet; while Goonong-Kasumbra is nearly 1000 feet higher. These high chains so copiously water the plains and coasts beneath, that, instead of being in any degree parched and arid, they are overspread with too luxuriant a vegetation. The ground is almost choked with dense forests, and with canes, rattans, and other species of tropical underwood; and a great part of the southern shore consists of a forest of mangroves growing out of a morass. Culture has but partially and rudely cleared these encumbrances, and directed the fruitfulness of the soil to useful objects. Sumatra does not produce so many objects for exportation as smaller and even less fertile islands. The most important is pepper, produced in considerable abundance, yet not equal to that of Malabar. This island, however, excels all other countries in the abundance and excellence of its camphor. This substance consists of the concrete juice in the heart of a species of tree, which, however, is becoming daily scarcer, being cut down by the natives for its valuable wood. In Europe, camphor has only a limited use as a medicine and cosmetic; but the Chinese value it highly, and pay a much larger price for that of Sumatra than of Japan.

The kingdom of Acheen occupies the most northerly part of this island, extending opposite to the coast of Malacca. At the first arrival of Europeans, it held dominion over divers states both of the island and continent, and was dignified with the title of empire. Though now greatly reduced, and restricted within its original limits, it has always, amid violent internal dissensions, remained independent of any European power. The Acheenese are a seafaring race, bold, stirring, and often piratical, but inspired by no inconsiderable share of commercial spirit. The capital city of Acheen presents a complete specimen of the seaports of these countries. It consists of about 8000 bamboo habitations, raised on posts above the marshy shore, and so completely enveloped in wood, that from the sea it appears like an extensive forest.

To the south of Acheen, but to the east of the great range of mountains, extends Menangkabao, which also, at an early period, held many states under its dominion, and was dignified with the title of empire. It was the original country of the Malays, whence they spread to other parts of Sumatra, to Malacca, and Borneo, till they became the ruling people in the Indian seas. This country is watered by a large lake, said to be thirty miles in length, though the precise situation is not ascertained; it abounds in gold, and is under very tolerable cultivation. The inhabitants appear to have made greater progress in the arts than

any of the other islanders. The gold and silver filigree work, the only fine manufacture in the Archipelago, is executed by them almost exclusively. They supply all the rest of Sumatra with arms; and, since the introduction of those of Europe, manufacture very good muskets and gunpowder. They were very early converted to the Mahometan religion; and their country and capital possess still a sacred character even among their neighbours the pagan Batta. The country was entirely independent of Europeans till recently, when the Dutch, taking advantage of intestine dissensions, penetrated into it, and established their supremacy.

The Battas occupy the country and coast on the opposite or western side of the mountains. This extraordinary race display in some respects a degree of civilisation not to be found among the surrounding states. Their country is fertile, and cultivation generally diffused. They have an alphabet of their own, distinguished by the singularity of being written from the bottom upwards; and the characters are rudely stamped with the point of a dagger on the surface of a bamboo or branch; sometimes even upon a growing tree. In this rough manner, however, the majority of the people can both read and write. But with these attainments they combine habits which have been considered as belonging to the most extreme barbarism. Anthropophagy is not only practised in the heat of victory, to gratify deadly vengeance, but prescribed as a regular part of their laws and institutions. For all who are guilty of robbery, adultery, unlawful marriages, or other high crimes, the penalty is, to be publicly eaten by their countrymen. The officers of justice and the injured parties assemble at the place of punishment, with a provision of salt, pepper, and citron; the individual most wronged selects the first morsel, cuts it off, and eats it; the rest follow according to their rank, till the leader of the assembly severs the head, and carries it off as a trophy. Authors of good repute have asserted that they ate their aged and infirm relatives, after various ceremonies, among which was that of dancing round a tree, calling out, "When the fruit is ripe it must fall;" but, if this most unnatural practice ever prevailed, it is now entirely discontinued. The number of little tribes into which this people is divided, and who wage almost ceaseless war against each other with deadly enmity, appears to be the circumstance which chiefly keeps alive among them this spirit of ferocity. They are assimilated to savage life also in the treatment of their women, who are regarded as little better than slaves, and on whom the labour of cultivating the ground and other hard tasks are devolved. The Battas are pagans, and their religion little known. From their ports of Barous and Tappanooly they export a large quantity of camphor, with gum benzoin and a few other commodities.

The kingdom of Siak occupies the eastern coast of the territory, of which the inland and western parts belong to the two states now described. A broad river, rising in the mountains of Menangkabao, traverses the territory, and is navigable sixty-five miles up to Siak the capital; but the chief trade is carried on at the seaport of Campar. The navy and commerce of Siak were once great, and are still considerable. The Dutch, besides the ordinary commodities of Sumatra, draw from it a considerable quantity of timber; but they have not formed any settlement upon its coast.

The southern quarter of Sumatra is on the whole the least improved, a great extent being marshy, uncultivated, and overgrown with dense forests. On its hills, however, is the most abundant growth of pepper, the commodity which Europeans principally seek in this island; and here their chief settlements have been formed. Palembang, on the eastern side, and Bencoolen, on the western, have long been the capitals: the first of the Dutch, the second of the English settlements in Sumatra. The sultans of Palembang generally encouraged commerce; and their country has been the chief mart both for pepper and for the tin of the neighbouring island of Banca. The pepper is brought from a considerable distance in the interior. The Dutch long contented themselves with maintaining a fort at the capital, a town of 25,000 inhabitants, with a mosque and a palace handsomely built of stone; but in 1821, being involved in a quarrel with the sultan, they deposed him, and erected the territory into a province or residence. Great efforts were made by the English East India Company to raise Bencoolen into a place of importance: in 1714 they founded Fort Marlborough; and in 1810, their property there was estimated at 314,000*l*. The settlement, however, never paid its expenses; and the trade, instead of increasing, dwindled away; so that in 1824 it was considered advantageous to exchange it with Holland for Malacca, and some small possessions on the coast of India, which, though of no great importance in themselves, served to connect and consolidate other settlements. The Dutch then annexed Bencoolen to the province of Padang, fixing at the town of that name the seat of their administration, and their principal trade. To complete the picture of this part of Sumatra, we may mention the Lampongs and the Redjangs; interior tribes, under a rude feudal system, less improved on the whole than the Battas, yet having, like them, a language and alphabet, and not being guilty of the same savage enormities.

Sumatra is begirt by ranges of isles which, though comparatively small, present peculiarities that deserve some notice. On the western side, beginning from the southward, we may number Engano, the Poggy or Nassau group, Sebeeroo, Nyas, Bali (or Hog). These islands

have a rugged and mountainous aspect, and Sebeeroo is even the seat of an active volcano. The face of the country and the inhabitants have no affinity with those on the great island, but bear more analogy to the eastern part of the Archipelago, and even to the islands of the South Sea. Sago, instead of rice, is the staple food; the inhabitants, called by the Malays Mantaway, tattoo their skins, and speak a language quite different from that of Sumatra. The Poggy Islands are the chief seat of the rudest of these races, who are unacquainted with the use of metal, have no weapons but bows and arrows, and in many of their customs resemble the people of Otaheite. The natives of Nyas are much more frugal and industrious, rearing with success the hog and the sweet potato. Yet they are fierce and sanguinary, the country being partitioned among about fifty little chieftains, who wage deadly wars with each other. Nearly a thousand prisoners of war are annually sold as slaves, in which capacity the Dutch find them useful, though dangerous, as their fierce pride often impels them to the violent deeds familiar to those islanders.

The groups of the Nicobar and the Andaman islands may, for want of a more appropriate place, be here introduced. They extend northwards in almost a continued group from about 100 miles N.W. of Sumatra, where the Nicobar islands begin, to about 400 miles farther, where the Andamans terminate. The Nicobar islands are twelve, of which the principal are Sambelong, Carnicobar, and Nancowry. They are generally hilly and woody, abounding in cocoa-nuts. The inhabitants are of the brown or Malay race, and are peaceable and well-disposed. The Danes, who called these Frederick's Islands, formed first a commercial settlement in 1756, and then a missionary establishment in 1768; but both were abandoned on account of the sickliness of the climate. They have recently renewed the attempt, but, it is said, with no promise of better success. The Andamans consist of two long islands, the principal of which is about 140 miles from north to south. They are mountainous, woody, and in some parts very picturesque. The inhabitants, who are a variety of the Oriental negro, appear to be among the most degraded beings in existence. They go quite naked, live in hovels composed of twigs, never cultivate the ground, but subsist on fish; which, however, they shoot and spear with great dexterity. They have been accused of cannibalism, but perhaps without sufficient grounds. The English, with a view to the refreshment and shelter of their ships, attempted settlements first at Port Chatham in the large island in 1791, and then at Port Cornwallis on the smaller one in 1793; but both these stations were abandoned on account of the unhealthy climate.

Pulo Pinang, or Prince of Wales's Island, a small island of seven or eight leagues long, separated by a narrow strait from the coast of Malacca, was only one uninterrupted forest till 1786, when the English East India Company purchased it from the King of Queda, and formed a settlement there, with a view to the refreshment of their China ships. In 1805 it was made a regular government, subordinate only to that of Calcutta. The expectations of its becoming a grand ship-building arsenal have not been fulfilled; but it soon acquired commercial importance by becoming the depôt for the produce of all the neighbouring districts, as well as a place where all the vessels touched that passed between India and China; though in this respect it has been lately in a good measure supplanted by Singapore. Georgetown, the capital, consists of airy and spacious streets, and its markets are well supplied with provisions; but its ill-constructed fort is incapable of defence.

Off the eastern coast, Pandjoor and Rupat, almost immediately contiguous to Malacca, form dependencies on the kingdom of Siak. Lingen and Bintang, farther out at sea, are the centre of a numerous group of islets of the most varied form and aspect; some mere naked rocks, others covered with trees and verdure. They have been long, to the Malays, a great seat both of commerce and piracy. They are ruled by a sultan resident in Lingen, who acknowledges the supremacy of the Dutch, and has lately ceded to them in full sovereignty the islet of Rhio, separated from Bintang by a narrow channel. Rhio, being made a free port, has acquired great importance both as an entrepôt and a place of refreshment; and its population amounts now to about 6000.

The island of Banca derives its sole importance from the mines of tin, already described. It was a dependency of Palembang till the Dutch lately erected it, with Billiton, into a separate residence or province. The latter is distinguished by its mines of iron, the most valuable in the Archipelago, and nails made from which are exported to the neighbouring islands.

Java, the great island which next follows, is separated from Sumatra only by the Straits of Sunda, one of the main entrances into the interior seas of the Archipelago. It extends from east to west about 600 miles, with an average breadth of about 100. From its eastern extremity there extends a succession of smaller isles, Bali, Lombok, Sumbawa, and Floris, separated from it and each other only by narrow channels, and forming, as it were, a prolongation of Java. This island, then, with its attendant group, shuts in on the south all the islands and seas of the Archipelago, and can hold with most of them a direct and ready communication. The English and Dutch, while they contended with each other for supremacy in these seas, placed the centre of their commerce and dominion on the northern coast of Java. This island also surpasses all the others in fertility, population, and general im-

provement. It does not indeed excel in the finer spices, and even in pepper is inferior to Sumatra. But it is fruitful in the staples of tropical produce, rice, sugar, coffee; and has extensive forests of teak. According to Mr. M'Culloch, the island yields 3,000,000*l.* of revenue to the Dutch government, who maintain there 15,000 troops, of which not less than 8000 are European.

Batavia (*fig.* 743.), the capital of Java, and of the Dutch possessions in the East Indies, is situated on the northern coast, and not far from the western extremity of the island. Several islets surrounding the bay on which it is situated, afford secure anchorage to vessels of 500 tons. A small river runs through the town, the facilities afforded by which are increased by navigable canals. These, multiplied to a superfluous extent, aided in producing that extreme insalubrity for which Batavia was long notorious. Vessels which entered the port either for trade or refreshment, left it often with the loss of more than half their crews. By accounts accurately kept for twenty-two years from 1730 to 1752, the number of deaths in a population of 70,000 amounted to 1,100,000; and in the year 1751 alone there died 58,600. Yet the obstinacy of Dutch avarice still adhered to this fatal spot; but, within the last thirty years, Batavia has been much changed. General Daendels conceived the design of transferring the seat of government to Sourabaya; and, though unable to effect this object, he demolished a great part of the fortifications, and transferred the barracks and official residence to the heights of Weltevreden. The English, during their occupation, were prompted by a national taste to desert entirely the town, and cover with their rural seats the neighbouring districts, particularly that of Buitzenzoorg. When the place, however, was restored to the Dutch, the governor Van der Capellen applied himself to restore the town; and, by filling up useless canals, opening and widening the streets, he effected such an improvement, that it is now as healthful as any place in Java. The population, by a census in 1824, amounted, exclusive of troops, to 53,800. Of these 23,100 were Javanese or Malays, 14,700 Chinese, 12,400 slaves, 3000 Europeans, and 600 Arabs. At present it exceeds 60,000.

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Batavia.

The commerce of Batavia is not only that of the island, but of nearly the whole Archipelago, with the exception of the Philippines. In 1828, the exports consisted of coffee to the value of 8,024,000 florins; mace, 96,000; cloves, 229,000; nutmegs, 221,000; rice, 1,194,000; tin, 866,000; sugar, 456,000; birds'-nests, 521,000; piece goods, 499,000; Java tobacco, 401,000; pepper, 151,000; rattans, 141,000; salt, 119,000; various other articles, 3,372,000; treasure, 1,209,000: making an aggregate of 17,499,000 florins. The imports consisted of cotton manufactures, 4,778,000 florins; woollens, 263,000; provisions from England, 522,000; brandy and Geneva, 322,000; wines, 1,154,000; opium, 1,032,000; lead, 76,000; copper, chiefly from Japan, 1,034,000; steel, 41,000; iron, 206,000; India piece goods, 787,000; Chinese silk and cotton goods, 367,000; terra japonica, 478,000; rattans, 224,000; tripang, 381,000; marine stores, 264,000; various other articles, 3,431,000; treasure, 2,616,000: in all, 17,976,000.

The interior details of Java cannot, consistently with our limits, be described at great length. It is divided by the Dutch into twenty provinces, which they call residences. Of these, Batavia, Bantam, Buitzenzoorg, Preangers, Krawang, and Cheribon, compose the western part; while Tagal Pekkalongang, Kadou, Samarang, Japara, Rembang, Grissé, Sourabaya, Passarouang, Besukie, Bangouwangui, Saurocarta, Djojocarta, Madura, and Samanap, form the eastern. The two parts are divided from each other by the vast mountain forest of Dayou Loukhour, on the frontier of Cheribon, composed of impenetrable woods intersected by foaming torrents and deep ravines. The western side of the island is in general more level and capable of very general cultivation. It is almost entirely subjected to European influence, and new modes and objects of culture have, under European auspices, been introduced. The eastern part bears a different character; it is mountainous, wooded, and romantic, yet diversified with rich and beautiful valleys, carefully cultivated upon the native system. This part of the island has always been occupied by the most powerful native princes, ancient and modern, the latter of whom still maintain a large measure of independence, and pay only homage and tribute to the Dutch. Here, too, in consequence, are all the monuments of ancient greatness, and of the faith which formerly prevailed in Java.

In the western quarter, Bantam, next to Batavia, is the most celebrated district, having been long the capital of the English settlements, not only in the islands, but in all the Indian seas. The sultan has lately been dethroned by the Dutch, who have taken the administration entirely into their own hands, and have, it is said, introduced considerable improvements. The town of Bantam is now almost deserted in consequence of its unhealthy situation, and the transference of the trade to Batavia. Ceram is now the principal place, and the residence of the governor. The rest of this division is almost entirely partitioned among little princes, held in strict subjection to the Dutch. Tjanjor, one of the chief interior towns, has been described as composed of broad alleys bordered with hedges of bamboo, the houses surrounded by fruit trees and odoriferous flowers, and communicating with each other by shaded footpaths.

The eastern part of Java, of which the general character has already been described, contains the kingdoms of Souracarta and Djojocarta, fragments of the dominion which, under the title of the empire of Mataram, held sway formerly over the greater part of Java. The former is estimated by Sir S. Raffles to contain 972,000, the latter 685,000 inhabitants. The loftiest mountains and the finest valleys are found in this region. The two capitals, bearing the same name with the kingdoms, are estimated to contain each about 100,000 inhabitants; but are merely collections of large straggling villages. The residences of the sovereigns are only clusters of various edifices surrounded by brick walls. The Dutch maintain well-constructed forts and strong garrisons to overawe the natives.

The ancient structures, already alluded to as distinguishing this part of the island, deserve some more particular mention. Mojapahit, the capital of the greatest princes who formerly ruled over Java, may still be traced in the district of Sourabaya by extensive ruins of walls and temples, built only of brick, yet displaying often considerable beauty. But the most complete example of a temple is that of Boro Budor (*fig.* 744.), situated in the mountainous and romantic, yet fertile, territory of Kadou, immediately to the east of Cheribon. It is a square structure of hewn stone, each side 520 English feet long, and the height 116 feet.

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Temple of Boro Budor.

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Gigantic Statue, Brambanan.

It is built on the summit of a small hill, and consists of a series of six enclosing walls, crowned by a dome. The outer and inner side of each wall is covered with a profusion of sculpture, including between 300 and 400 images of Boodh, from whom the temple, perhaps, received its name. But the most extensive display of ancient architecture is at Brambanan, in the district called Mataram, between Souracarta and Djojocarta. The temples, though built of hewn stone, are small, but clustered in extensive groups, of which the largest is that called the Thousand Temples. It occupies a space nearly square, 600 feet in length by 550 in breadth, within which are four rows of small edifices, surrounding a large central one. The whole group has four entrances, each facing a cardinal point, and guarded by two gigantic statues, of the form here represented (*fig.* 745.), and which are nine feet high though kneeling, and eleven feet in circuit. Singhassari, also, in the district of Malang, once the seat of a powerful monarchy, presents a wonderful multitude of temples and images. In general these structures are profusely covered with minute and often elegant ornaments and sculptures; but they are broken into too many similar parts, and consist only of sculptured walls, without columns, arcades, or any thing which can make them combine unity with relief and variety.

The sea-ports of Samarang and Sourabaya, on the northern coast of the eastern division, though quite subordinate to Batavia, are still considerable. The former is the seat of government for the principal eastern provinces, including the two great Javanese kingdoms. It has a flourishing commerce, and a population of nearly 40,000. Sourabaya, still farther east, in a very fine country, the seat of the ancient empire of Mojapahit, is still more flourishing, both as a mart for the products of the surrounding country, and as a place of refreshment for vessels bound to China and the Philippines. Its road is spacious and safe, and its

fine naval arsenal derives ample materials from the forests of teak by which it is surrounded. The population is estimated at about 50,000.

The island of Madura has been erected by the Dutch into one of their twenty residences; and they exercise almost entire control over the three native princes. The people still profess, to a great extent, the Hindoo religion, practise the burning of widows, and are accused of using poisoned arrows. Samanap, the capital, is only a large village, partly inhabited by Chinese. Bali is almost entirely independent, under eight native princes, and is chiefly distinguished, as already observed, by the complete prevalence of the Hindoo creed and institutions.

Of the range of smaller islands extending eastward from Java, Lombok, with high wooded mountains in its centre, is fertile and well cultivated by an industrious race, who irrigate the lands by means of tanks, carry on a considerable trade, and afford refreshments to European vessels passing eastward. Sumbawa is of greater extent, being 180 miles long, and containing in its eastern quarter the powerful kingdom of Bima, tributary to the Dutch. This island affords a large supply of sapan wood for the Chinese market. It contains a very active volcano, which in 1815 committed dreadful ravages.

The large islands of Floris and Timor, extending in the same direction, may be considered as the link between the Oriental and South Sea islands, to which last, both in customs and language, the natives bear a close analogy. Floris is very little frequented by Europeans, and has ceased to afford, as formerly, a supply of sapan wood. On Timor, however, the Dutch have formed the settlement of Coupang, with the view of procuring provisions from the Moluccas, and, by making it a free port, have raised it to some importance. It has become a great mart for the tripang, which is collected both on the neighbouring shores and on those of New Holland. The Dutch, with difficulty, hold in vassalage the native states, of which the principal are those of Veali, Luka, and Samoro; and their influence is shared with the Portuguese, who, in their settlement of Dieli, retain still some remnant of that power which formerly extended so wide over this region. The smaller islands between Floris and Timor; Simao, Rotti, Dao, Savou, governed by rajahs, partly vassals of the Dutch, partly independent, call for little particular notice.

Celebes, to the north of Floris, is one of the most remarkable portions of the Archipelago. Its position, between 2° N. and 5° S. lat. 118° and 125° E. long., would indicate very large dimensions; but it is so indented by the deep bays of Bony in the south, Tominie and Tolo on the east, as to form only a cluster of long peninsulas, while the distance from sea to sea nowhere amounts to 100 miles. The people are less advanced in civilisation than those of Java, though they possess more of a bold energy of character. The native government is monarchy combined with a very turbulent aristocracy. The troubles by which it was agitated are attested by the very names of the princes taken from the manner in which they died; as "the throat-cutter;" "he whose head was cut off;" "he who ran a muck;" "he who was beaten to death on his own staircase;" and even the epithet "he who died reigning," strongly intimates the rarity of the occurrence. The Hindoo faith and institutions found little place in this island. It was not till the beginning of the seventeenth century that the Mahometan religion was introduced by the mingled power of force and persuasion. The Macassars of Goa were then the most powerful tribe and held wide sway over this and even the neighbouring islands; they at one time fitted out against the Dutch a fleet of 700 vessels, and 20,000 men. About the middle of the seventeenth century, however, the state of Bony, supported by the Dutch, acquired a complete ascendency, and that of Goa sunk into a reduced and vassal condition.

The Macassars and the Bugis are the two tribes who hold the leading place in this great island. The former, as already observed, are now completely fallen from their ancient supremacy, and closely confined within their original limits. The Dutch have extorted the cession of the city of Macassar, and its surrounding district, and have changed its name to Vlaardingen, erecting for its defence Fort Rotterdam. The sovereign continues to reside at Goa. The Bugis are divided into those of Bony and Waja. The former are much the most powerful, being able to muster 40,000 fighting men, and forming thus, at present, completely the ruling native state. But the Bugis of Waja are decidedly the most civilised and improved, and are, indeed, the most active commercial people in the Archipelago. Their vessels with cargoes which, according to Sir S. Raffles, are often worth 50,000 dollars, are seen in all the seas from New Holland to Siam. The entire population of the island is estimated, by Mr. Hunt, at about 1,000,000. The Dutch maintain their influence rather as the head of a numerous confederacy than as sovereign rulers. Besides the states already named, we may mention Sopeng, Mandhar, Southon, and Panete.

Borneo, if we exclude New Holland, as a continent, will rank as the largest island in the world, being between 800 and 900 miles from north to south, by 700 from east to west. It is also well gifted by nature. Though placed directly beneath the equator, the mountains of the interior, some 8000 feet high, with the large and numerous streams, entirely secure it from aridity; and though the soil, formed from primitive rocks, is by no means uniformly fruitful, yet rice and the usual tropical grains are raised with facility; pepper, cinnamon,

cotton, coffee, grow wild. This island, according to Mr. Hunt, enjoys a singular felicity in the absence of any ferocious animal, though the dense woods would afford them shelter, and they actually harbour the singular species of the orang-otang. The mines of gold, the most copious in the East, and those of diamonds, in which it is second only to Golconda, have been already described. Notwithstanding these advantages, Borneo is the rudest and least improved territory in this quarter of the world. The want of any deep bays and inlets, to facilitate communication and the access of foreigners into its interior, is probably the chief cause of its backward position. The inland tracts are now the chief haunt of the savage race of the Oriental negro, called here in different districts Dayak, Idaan, Maroot, &c. The Malays and other tribes, who have occupied generally the coasts and navigable rivers, describe these their inland neighbours in the darkest colours. They are represented as considering a man unfit for matrimony or any important function of life, till he has imbrued his hands in the blood of at least one fellow-creature; as so devoted to human sacrifice, that a number even of the poorer class will club together to purchase the cheapest man they can find, and offer him as a victim; that they devour the flesh of their enemies, drink their blood, use their bones and skulls as ornaments, and even as money. Through hollow wooden tubes they blow poisoned arrows, the wound of which is said to be mortal. Yet it is certain, that many of them cultivate the ground, rear domestic animals, and carry on some trade; and a tribe called Biajoos are active navigators, roaming from shore to shore, amid the perpetual summer of the tropic. Mr. Hunt accuses the Malays of exaggerating the offences of these poor savages, whose enmity they have justly incurred by driving them into the interior, and seizing every opportunity of catching and selling them as slaves.

The local features of this island, with the exception of the gold and diamond mines already described, do not require very detailed notice. Borneo, or Bournu, capital of a kingdom which, during its greatness, gave name to the whole island, is built upon piles on the swampy banks of a large river; canals run through its streets, and the communication from house to house is partly by boats. It has much declined, and is said to contain less than 3000 houses, and only 10,000, or 12,000 inhabitants. Succadana, a great commercial place in the middle of the western coast, was, in the end of last century, subverted by an Arab named Abdul Rachman, assisted by the Dutch, who, in conjunction with him, founded Pontiana. This place, according to Mr. Hunt, is now the most flourishing in the island, and its population, therefore, is probably under-rated by M. Balbi at 3000. In the southern quarter, the trade centres chiefly in Banjermassin, a port of 6000 or 7000 inhabitants, capital of a kingdom almost entirely under the control of the Dutch. In the interior, the chief states are Matan, the most central district, which once assumed the title of empire, and held Succadana and a great part of the western coast; but the sovereign is now confined to his inland possessions, Sambas and Mompava; celebrated, especially the last, for gold mines worked by Chinese, who form the chief inhabitants of Montradock, its capital.

The Sooloo, called by some the Suluk Islands, off the eastern coast of Borneo, and closely connected with it, may be properly introduced here. They are twenty-seven in number, the great Sooloo being thirty miles long and twelve broad, and the population of the whole is estimated at about 300,000. The people are almost entirely devoted to piracy, for which their situation, on one of the most frequented routes of the Eastern Sea, affords ample facilities. Mr. Hunt, in the *Friend of India*, has drawn a striking picture of this "Algiers of the East." From 300 to 400 vessels, whose crews amount to 10,000, are continually issuing forth on this fierce and perilous occupation. It is carried on under the sanction of the sovereign, who draws twenty-five per cent. of the proceeds. Yet the same people are animated by an active spirit of commerce, which, in one direction they seek to destroy, but in another cherish and protect it. The vessel which, encountered in the open sea, would have been instantly seized, plundered, and the crew sold as slaves, from the instant it has anchored in the road of Sooloo, enjoys perfect security. We presume, though our authority does not expressly say so, that proof of being bound to or from this destination will place the vessel in safety. The banks of pearls already noticed, and the supplying of China with tripang and birds'-nests, afford scope to a considerable traffic.

Singapore (*fig.* 746.), become the centre of the commerce of all the islands now described, may now be treated of in connection with them. It is situated on an island at the southern extremity of the peninsula of Malacca, at the eastern opening of the straits bearing that name. It was founded only in 1819 by Sir Stamford Raffles, in a position so happy that all the commercial tribes of those seas immediately made it their emporium. In 1824, its population amounted to 10,683; in 1830, to 16,634; and in 1833, to 20,978; of whom 119 were Europeans, 7,131 Malays. 8,517 Chinese, with Arabs, Jews, Hindoos, Bugis, &c. About 5000 Chinese arrive annually by the junks; of whom 1000 remain, the others disperse among the neighbouring settlements. The Bugis with their proas arrive not only from their own but the neighbouring islands. Their number is about 200 annually from the west coast of Borneo, from the east coast, and Celebes; from Bali, Lombok, and Sumbawa. The imports in 1827 and 1828 amounted to 1,458,000*l.*, and the exports to 1,387,000*l.* The amount is said to have since nearly doubled. The articles dealt in are all those of

China, the Oriental islands, and the Indo-Chinese countries, with British cottons and other manufactures.

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Singapore.

The Moluccas, or Spice Islands, derive their great celebrity from producing the precious commodities of cloves, nutmegs, and mace, which have been already described. In other respects they present few objects of much interest. Gilolo, the largest, broken, like Celebes, into a cluster of peninsulas, presents the usual spectacle of a rude people governed by a number of turbulent chieftains. Ceram is nearly similar, except that the greater part is under the power of a single sultan, dependent on the Dutch, who take vigorous measures to check the disposition to piracy among the natives. Small islands, contiguous to these great ones, occupy, in this group, the most conspicuous place. Ternate and Tidore, off the western coast of Gilolo, the one twenty-five and the other twenty-one miles in circuit, have always held a sort of political supremacy. The early European navigators found them contending for the sovereignty which they still hold over the greater part of Gilolo, though in subordination to the Dutch. Amboyna, an island near Ceram, thirty-two miles long and twelve broad, is distinguished as the chief settlement of the Dutch, and the only place where, till lately, they permitted the clove to be reared. They have divided it into cantons, where this precious spice is cultivated, under the superintendence of native chiefs, who are responsible for delivering the whole to the government. The town of Amboyna is neatly built in the Dutch style, and contains a population of about 7000. Fort Victoria, built by the Portuguese, still defends it. The ten small Banda islands, of which the principal are Neira, Pulo Ay, and Lantour, are distinguished by the growth of nutmeg, raised under the same exclusive system. Nassau, the residence of the Dutch governor, is a small town, with 1000 inhabitants, on the island of Neira.

The Philippines form an extensive group of two large and nine smaller islands, situated at the north-eastern extremity of the Archipelago. Few countries are more favoured as to soil and climate. Though placed but little north of the equator, the height of the mountains, and the ocean breezes, preserve them from suffering under any severe or scorching heat. The moisture derived from their exposure to the vapours of the Pacific is somewhat excessive; yet, combined with the heat, it produces a most luxuriant vegetation. Still these islands are rather rich in the staple tropical productions, rice, sugar, &c., than in those aromatics for which some of the other islands are celebrated.

Among the natives there are a considerable number of the negro race; yet, long before the arrival of the Europeans, these had been driven into the mountains by the Bisayans, a branch of the brown oriental race. These cultivated the ground with considerable diligence, and had raised themselves above the completely savage state; yet they had not, like the other islanders, received colonies, or imported any high civilization from the great Asiatic kingdoms. The most improved tribe were the Tagalas, inhabiting the sea-coast of Luçon, who constructed and navigated vessels of some magnitude with considerable skill, and had a language which was considered classical throughout the islands.

The Spaniards early took possession of the Philippines, and, if we except the English expedition of 1762, possessed them without interruption from any of the other European powers. This people, who labour under severe reproach as to the management of their other colonies, seem to have deserved less blame here. They imposed, indeed, on the natives a heavy poll tax, but did not cramp their industry; and the missionaries assiduously communicated to them, along with the true religion, a tincture of European arts and knowledge. Hence Mr. Crawfurd conceives that, while in all the others the character of the natives has been deteriorated, in the Philippines it has been decidedly improved by European intercourse. They took arms, accordingly, in defence of these masters, when attacked by another power. The foreign trade, however, was subjected to those jealous restrictions imposed by the prevailing policy of Spain. It was limited to a single galleon, despatched annually from Manilla to Acapulco. Notwithstanding the circumstance of there being only one, yet the mystery and the splendid ideas attached to the very word galleon

diffused an impression that Manilla was a place of immense wealth; and the British expedition which captured it in 1762 imposed a contribution of 1,000,000*l.* sterling, which the city was wholly unable to pay. When exact information was obtained of its commercial transactions, they proved to be very limited. They have materially increased since the Spanish revolution, which, loosening the ties with the mother country, threw open the trade to other nations, and the monopoly has never since been re-established. In 1827, the exports in indigo, sugar, tripang, birds'-nests, sharks'-skins, sapan wood, ebony, rice, dried flesh, pepper, mats, cloths, &c. amounted to 938,000 dollars, with 110,000 in treasure; the imports, to 937,000 dollars, with 156,000 in treasure. The trade appears, by Mr. M'Culloch's statements, to have since increased nearly one-half, though it is still very inferior to the vast capacities of the country.

In regard to local features, the island of Luçon is covered to a great extent with high mountains, among which are several active volcanoes, with hot springs in their vicinity; and violent shocks of earthquake have been felt at Manilla and in other quarters. The city is built at the mouth of a fine river, on a noble bay, and three leagues to the southward is a good and safe harbour at Cavita. On opposite sides of the river, connected by a noble bridge, are the war town and the trade town; the latter much the larger, but the former better built, the seat of government, containing some handsome edifices, and churches richly decorated. The population has been very variously estimated, chiefly because some do and others do not include its extensive suburbs. M. Balbi thinks that with these it may contain 140,000 people, which would make it the greatest city in the Archipelago. Mindanao, a large island, 300 miles long, is little occupied by the Spaniards; whose chief settlement, Samboangan, is used only as a place of banishment. On the eastern side is the large kingdom of Mindanao; the rest is occupied by various tribes, among whom 20,000 are Mahometans, and 61,000 almost savage. Similar observations will apply to Mindoro, a fine island, but little known, and respecting which we need not refute the report of the early navigators, that its inhabitants had tails. We may mention, also, Samar, where the missionaries have made pretty extensive conversions; Zebu, which derives a dark celebrity from the death of Magellan; Panay, Marinduque, Negros, Mesbate, Bohol, and Leyte.

BOOK III.

AFRICA.

CHAPTER I.

GENERAL SURVEY OF AFRICA.

AFRICA, a spacious continent, comprising nearly a third of the world known to the ancients, composes a peninsula about 4320 miles in length from north to south, and 4140 in breadth from east to west. Its shape is an irregular pyramid, at the southern extremity diminishing almost to a point; so that it has, properly speaking, only three sides. Its western coast, by far the most extensive, faces the Atlantic, which on the other side is bounded, at several thousand miles' distance, by the parallel coast of America. To the east, Africa looks upon the southern Pacific, but chiefly that mighty portion of it called the Indian Ocean, which has for its remote opposite boundaries Hindostan, the Eastern Archipelago, and New Holland. From Europe, Africa is separated by the Mediterranean, and from Asia by the Red Sea. Both these gulfs communicate with the ocean by narrow straits, at which Africa comes almost in contact with the opposite continents; but it is at their interior extremities that they are separated by that celebrated isthmus, only sixty miles in breadth, which connects this vast continent with that of Asia.

SECT. I.—*General Outline and Aspect.*

Africa, in all respects except its vast extent, is the least favoured portion of the globe. Its prevailing aspect is rude, gloomy, and sterile. The character of desert, which elsewhere is only partial and occasional, belongs to a very great proportion of its widely extended surface. Boundless plains, exposed to the vertical rays of a tropical sun, are deprived of all the moisture necessary to cover them with vegetation. Moving sands, tossed by the winds, and whirling in eddies through the air, surround and continually threaten to bury the traveller, in his lengthened route through these trackless wilds. The watered and cultivated districts consist of little more than belts, with which this huge expanse of desert is begirt. The best known, and perhaps the finest, is that which borders the northern coast

along the Mediterranean, and stretches for 50 or 100 miles inland. The famous range of mountains called Atlas, which ancient fable represented as supporting the heavens, with numerous chains branching from it across the continent, diffuses moisture and fertility over sands which would otherwise have been totally unproductive. Then follows the immense ocean of desert, nearly 3000 miles in length, and 1000 in breadth, reaching across the whole continent from east to west, and from north to south, between lat. 15° and 30°. The sterility of the scene is only interrupted by a narrow line, of not above half a mile, formed by the course of the Nile through Nubia, and by a few islands, or, as they are termed, oases, scattered at wide intervals over this immeasurable waste. These spots, affording springs, verdure, and a few dates, support a scanty population; but are chiefly valuable as affording places of rest and refreshment for the caravans. The traveller who has crossed this dreary interval is cheered by the view of a long line of territory exhibiting a different and much more smiling aspect. Lofty ranges, celebrated under the name of the Mountains of the Moon, cross the central part of the continent, and form perhaps an almost unbroken girdle round it. Thence descend many rivers of the first magnitude; the Nile of Egypt, the Senegal, the Gambia, and the famed mysterious stream so long sought under the name of the Niger. These set bounds to the empire of sand, which would else overspread nearly all Africa; they inundate their banks, and fertilise extensive regions, which are covered with rich harvests, and peopled with nations that have made considerable advances in civilisation. A great part of this tract has been recently explored, though much still remains for discovery; but farther south, the greater part of the interior, as far as the Cape of Good Hope, a space of 40° of lat., has never been trodden by any European. The districts on the east coast, however, are very well known, and still more those on the west. They present a totally different aspect from that of northern Africa; profusely watered by great rivers, in many places luxuriant with tropical products; in others inundated and swampy, overgrown with huge forests and underwood. Some late observers, however, in travelling inland from the Cape, have caught a glimpse of vast expanses of desert, reported almost to rival those at the opposite extremity of the continent. Lastly, the southern angle presents to the stormy seas of the Pacific broad table rocks and high rude plains, covered, however, in many places, with good herbage and vegetation.

Sect. II.—*Natural Geography.*

Subsect. 1. and 2.—*Geology and Botany.*

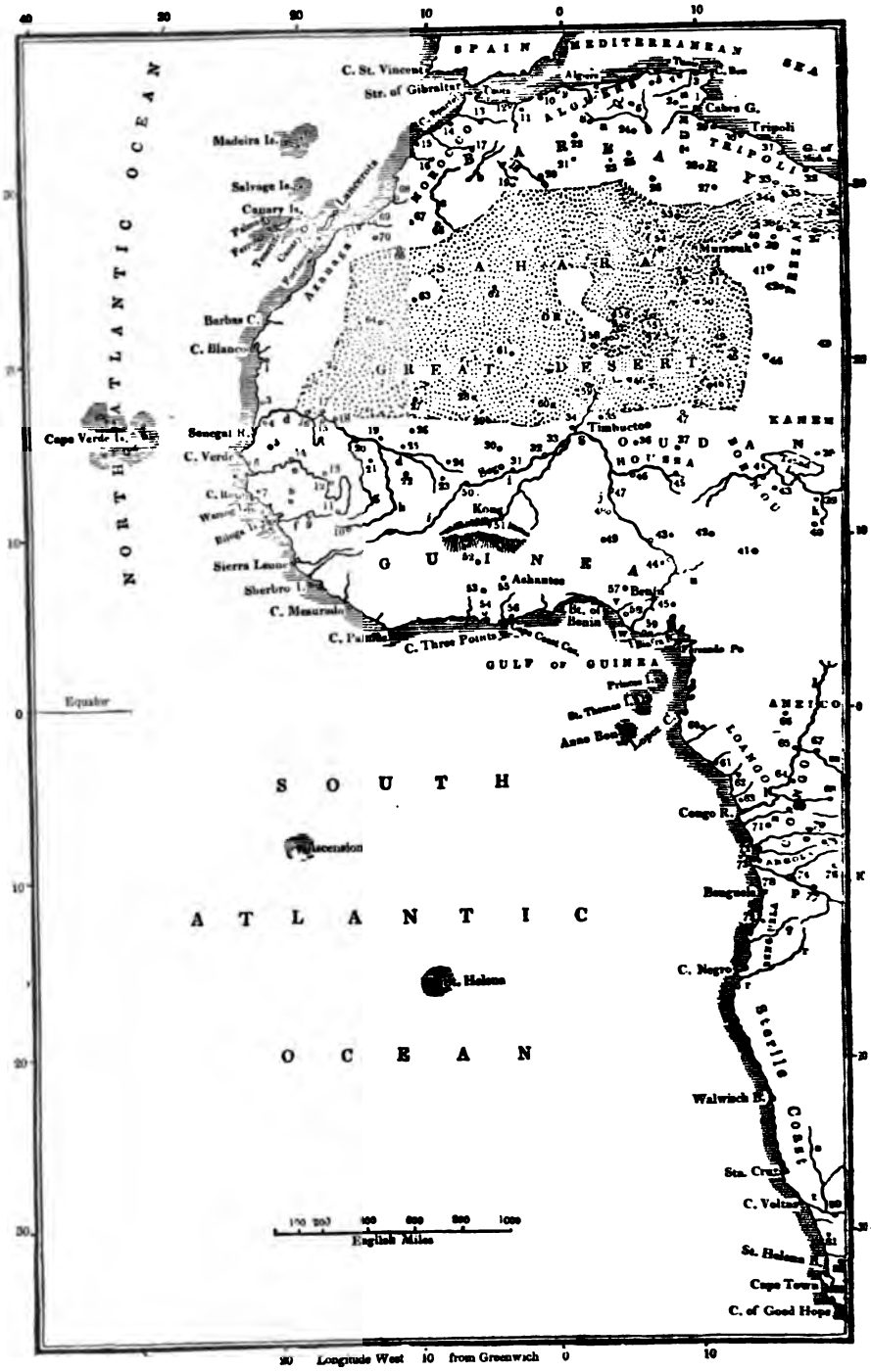
The Geology and Botany of a continent so extensive and varied as Africa can only be treated with advantage under its respective regions.

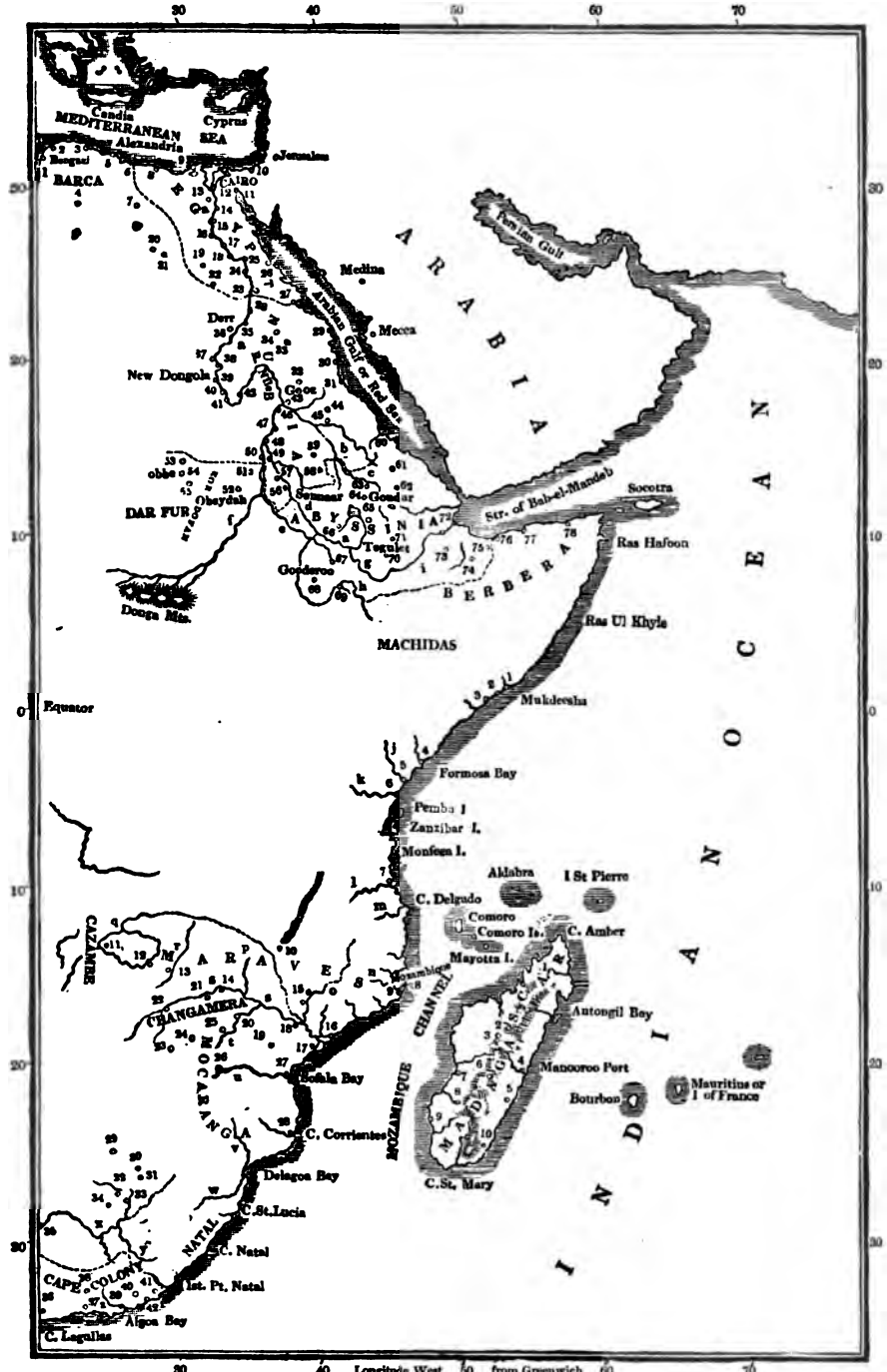
Subsect. 3.—*Zoology.*

The Zoology of this vast peninsula assimilates in many respects to that of Asia; while its northern provinces, as we have already seen, present us with many of the European animals. As we recede, however, from such regions as border upon these two continents, the peculiarities of African Zoology become apparent, and show us the necessity of treating it as one of the principal provinces of Physical Geography. That Nature has been far less prolific, both in the number and in the variety of her forms, in this continent, than in any other of equal extent, may be readily inferred from its peculiar formation. Vast deserts, equal in extent to the whole dominions of the most powerful European sovereigns, intersect this continent in various directions, affording neither "green herb or limpid stream," nor even the bare sustenance necessary to life for either man or beast. These deserts are indeed depopulated; they are only passed by the wandering savages, or occasionally visited by migratory troops of quadrupeds. The fecundity of animal and vegetable life is generally equal: hence, on the western and southern coasts, bordering the line of the great virgin forests, numerous animals of the largest dimensions become abundant, the air resounds with the notes of birds, and innumerable insects are sporting on the flowers.

In giving the following rapid sketch of African zoology, it appears natural to arrange our observations under three heads: considering, first, Northern Africa, which includes that portion of the continent to the north of the Great Desert, and washed at its confines by the Mediterranean and the Red Sea; secondly, Tropical Africa; and thirdly, Southern Africa.

The Zoological features of Northern Africa, so far as regards its ornithology, have been already dwelt upon; and in this department a much greater approach is made towards the European Fauna than in any other. The quadrupeds, however, are eminently distinct. The Lion is occasionally seen. Hyenas are not uncommon; but the Jackalls stated to inhabit these parts are unknown in Egypt, Nubia, and the adjacent countries. A few species of Antelope range over the arid tracts of Barbary, and are probably peculiar to this side of the great sandy ocean; while several quadrupeds of Western Asia appear to propagate and extend their range in the countries bordering on Arabia and Egypt. The northern Giraffe (Camelopardalis antiquorum *Sw.*), which, from very recent researches, we now consider as


SPAIN
MEDITERRANEAN SEA
C. St. Vincent
Str. of Gibraltar
Algiers
Tunis
Cabes G.
Tripoli
Madeira Is.
Salvage Is.
Canary Is.
Mursouk
SAHARA
GREAT DESERT
Barbas C.
C. Blanco
Cape Verde Is.
Senegal R.
C. Verde
Timbuctoo
HOUSSA
KANEM
Sierra Leone
Sherbro I.
C. Mesurado
GUINEA
Ashantee
Benin
C. Three Points
Gaboon R.
GULF OF GUINEA
Fernando Po
Prince's I.
St. Thomas
Anno Bon
ANZICO
LOANGO
Congo R.
Equator
SOUTH
Ascension
ATLANTIC
OCEAN
St. Helena
Benguela
C. Negro
Walwich B.
Sta. Cruz
C. Voltas
St. Helena
Cape Town
C. of Good Hope
NORTH ATLANTIC OCEAN
English Miles
Longitude West 10 from Greenwich 0


Candia
MEDITERRANEAN SEA
Cyprus
Alexandria
Jerusalem
CAIRO
BARCA
Persian Gulf
ARABIA
Red Sea
Medina
Mecca
Derr
New Dongola
Goos
Obbe
Obeydah
DAR FUR
Soymaur
Gondar
Socotra
Str. of Bab-el-Mandeb
Terqulet
Ras Hafoon
Gooderoo
BERBERA
Donga Mts.
MACHIDAS
Ras Ul Khyle
Equator
Mukdeesha
Formosa Bay
Pemba I.
Zanzibar I.
Monfeea I.
Aldabra
I St Pierre
C. Delgado
Comoro
Comoro Is.
C. Amber
Mayotta I.
CAZEMBE
CHANGAMERA
Mozambique
CHANNEL
Antongil Bay
Mahoroo Port
Bourbon
Mauritius or I. of France
Sofala Bay
C. Corrientes
MOZAMBIQUE
Delagoa Bay
C. St. Lucia
NATAL
C. Natal
Ist. Pt. Natal
CAPE COLONY
Algoa Bay
C. Lagullas
C. St. Mary
INDIAN OCEAN
Longitude West from Greenwich

unquestionably a distinct species from that of Southern Africa, whose food seems to render him nearly independent of herbage, has recently been found towards Nubia by that enterprising and able naturalist M. Rüppell. The few genera of birds which occur in the Barbary states are neither remarkable for their beauty nor their singularity; nor does the Fauna of northern Africa, in general, possess so much interest as might be imagined.

The Great Desert forms a natural and marked separation between the northern and the tropical Fauna, although we may include in the latter Senegal, and the whole range of that thickly wooded coast extending towards Guinea. The pestilential nature of the climate to the European constitution opposes an insurmountable barrier to the investigation of these countries, no less than to the establishment of maritime colonies: hence, a few gleanings that have been made near Sierra Leone, and the more industrious attention of the French to the productions of Senegal, comprise the scanty materials upon which our knowledge at present rests. Of all those ardent but ill-fated travellers, who have sunk beneath the poisonous atmosphere of this accursed country, the name of Bowdich will long be remembered with peculiar regret by the naturalist; as being the only one whose previous studies and acquirements had peculiarly fitted him for reaping that harvest of unknown forms with which nature has filled the vast and interminable forests which belt the coasts of Western Africa. In these impenetrable recesses live the Chimpanzees, the largest of apes, representing the Orang Otang of India; troops of large baboons and monkeys, of unknown species, together with numbers of those ferocious and ruminating animals so peculiarly characteristic of the African continent. Nor are the birds less remarkable. That singular bird, unique in its genus, the Prionops plumatus, or Ground Shrike (*fig.* 749.) whose forehead is tufted with a loose thick mass of bristly feathers, appears peculiar to Senegal, where it is by no means uncommon. From the same region we receive numerous little sun-birds (*Cinnyris* Cuv.) of the most superb plumage, many species of Drongo Shrikes, with Orioles, Rollers, Fantailed

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Head of the Ground Shrike.

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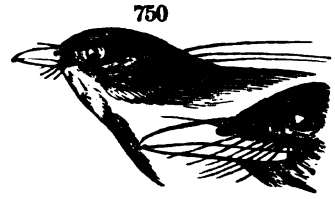

Bristle-necked Thrushes.

Grakles (*Lamprotorni*); and other richly coloured birds. Towards Sierra Leone the ornithological features of Central Africa become more prominent. The rare and lovely Plantain-eaters (*Musophagidæ*) seem restricted to these unhealthy regions, from whence also we derive the Guinea fowl; while those curious birds the bristle-necked Thrushes, forming the genus *Trichophorus* (*fig.* 750.), are almost peculiar to the forests of Guinea and Sierra Leone. Serpents of gigantic size are mentioned by travellers; and tremendous crocodiles swarm in the rivers. The Insects are no less numerous; and, by the arduous labours of

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References to the Map of Africa.—West Part.

NORTH PART.
1. Cabes
2. Gaffsa
3. Tunis
4. Tabarca
5. Constantina
6. Tubnah
7. Algiers
8. Dimidde
9. Mostagan
10. Oran
11. Tlemsen
12. Melila
13. Fez
14. Salle
15. Mogadore
16. Morocco
17. Tedla
18. Sigilmessa
19. Sugahila
20. Beni Cromi
21. Gardeia
22. Tegorarin
23. Wergala
24. Tuggurt
25. Engousah
26. Necan
27. Gadamis
28. Tioret
29. Zarzina
30. Tripoli
31. Ign
32. Medjea Sultan
33. Boujem
34. Sockna
35. Wadan
36. Zella
37. Tibesty
38. Zejhan
39. Zuela
40. Mourzouk
41. Tergerby
42. Ghad
43. Tibboos
44. Tuhya
45. Segzadem
46. Asbena
47. Agdaes
48. Tuaricks
49. Taboo
50. Wargela
51. Ghraat
52. Hoobaree
53. Telliaguess
54. Tafilet
55. Jarman
56. Esala
57. Akkably
58. El Waha
59. Tafeelalat
60. Ezawen
61. Taudeny
62. El Tarassa
63. Lakeneigh
64. El Kabla
65. Woled Adrialla
66. Tatta
67. Akka
68. Macas
69. Nun
70. Sukaana
71. Amselly.

SOUTH PART.
1. Arguin
2. Hodeu
3. Porlandik
4. Niahra
5. Quamkrore
6. Joal
7. Cachee
8. Geba
9. Kade
10. Teemboo
11. Bendeia
12. Konomba
13. Bode
14. Madina
15. Aguani
16. Gberaeghel
17. Cahede
18. Goumel
19. Koomiakary
20. Tefulinga
21. Bambouk
22. Koeena
23. Kamalia
24. Bangassi
25. Kemmoo
26. Benowm
27. Tissheet
28. Shingarin
29. Walet
30. Geosorro
31. Sego
32. Jinne
33. Jinbala
34. Timbuctoo
35. Affinoo
36. Audar
37. Tagama
38. Coria
39. Kussery
40. Loggun
41. Adamowa
42. Jacoba
43.* Rabba
44.* Kacunda
45.* Kirree
46. New Bornou
44. Old Bornou
45. Kashna
46. Sackatoo
47. Youri
48. Bousa
49. Eyeo, or Katunga
50. Bammakoo
51. Kong
52. Briquante
53. Yammy
54. Gura
55. Ashantee
56. Cape Coast Castle
57. Benin
58. Waree
59. New Calabar
60. Sette
61. Mayumba
62. Loango
63. Hacongo
64. Pango
65. Concobella
66. Mousol
67. Canga
68. S. Salvador
69. Congo
70. Pemba
71. Banga
72. Mazula
73. St. Paul de Loando
74. Massinguno
75. Ovando
76. Matamba
77. Cabaso
78. Benguela
79. Nova Redondo
80. Zebra Fort
81. Twee Fort
82. Clanwilliam
83. Cape Town.

Rivers.
a Adjedee
b Fillely
c Draha
d Senegal
e Gambia
f Grande
g Palmo
h Bafing
i Jeliba, or Niger
j Niger, or Quorra
k Shary
l Zaire, or Congo
m Congo, or Barbela
n Selunda
o Loze
p Coanza
q Gubero
r Bembarooghe
s Koump
t Orange
u Tubadda
v Benin
w Nun.

Smeathman, who immortalised his name by discovering the wonderful economy of the White Ant, we know more of this department of West African zoology than of any other. Among hundreds of species discovered by this traveller near Sierra Leone, not one has yet been found in the same parallel of latitude either of Asia or America. The conchology of Senegal was most ably explored by Adanson during 1749–53; his work being the last, or rather the only one of any authority, on this branch of African zoology. It appears that the Marine Testacea are in much variety and in great profusion; strikingly contrasting in this respect with the opposite coasts of America: the genera, however, do not differ from those of the Indian Ocean, although most of the species are perfectly distinct. The fish, and the rest of the invertebrated marine animals, are as little known as if they were not in existence. Such is a summary statement of the insignificant knowledge we yet possess of the Zoology of Central and Western Africa; yet, trivial as it is, we see enough to convince us how distinct are its characteristics, when compared with either that of the northern or the southern division. Beyond Sierra Leone, the whole of that region which intervenes between Guinea and the boundaries of the Cape of Good Hope is nearly as perfect a terra incognita to the naturalist as it is to the geographer.

The Zoology of Southern Africa forms the third division of our subject, Its northern extent may be traced to the farthest point, in that direction, yet reached by European travellers. At the head of these we must place Mr. Burchell; not only as being the one whose researches have been pushed far beyond all others, but whose general scientific knowledge gave him superior advantages. The general salubrity of this part of Africa, and the facilities which its long subjection to European powers has thus given to travellers, renders our knowledge of its animals and plants much more perfect than would otherwise have been the case; and the names of Sparrmann, Le Vaillant, and Lichtenstein are familiar to the naturalist, as the chief of those foreigners who have elucidated this portion of African natural history. The most striking peculiarity, indeed, of the whole continent is eminently displayed in the southern division, where the variety of quadrupeds is truly surprising, while the vast herds into which they congregate, but for the attestation of travellers, would be almost incredible. Elephants, Rhinoceroses of two species, Antelopes, Giraffes, and Ostriches traverse the arid plains of the interior, browsing on the scanty herbage afforded by the heaths and coarse grass, or on the thin foliage of the Mimosa trees; while the huge Hippopotamus, peculiar alone to Africa, (*fig.* 751.), is still numerous on the banks of the great rivers. Lions, Hyenas, Jackals, and some other ferocious quadrupeds, are dispersed throughout the country, but fortunately are not very frequent. The birds are more interesting than beautiful or elegant. The rapacious order presents us with many Vultures, and several Falcons peculiar to this part of the world: many of the Shrikes are

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Hippopotamus.

References to the Map of Africa.—East Part.

NORTH PART.
1. Bengazi
2. Barca
3. Bomba
4. Angela
5. Meraya
6. Ahlem Larcea
7. Siwah
8. Al Bareton
9. Alexandria
10. El Arish
11. Suez
12. Cairo
13. Medina
14. Feshn
15. Souadi
16. Sioot
17. Sadfeh
18. Gigeh
19. El Khargeh
20. El Cazar
21. Tenida
22. Chebba
23. Kalabech
24. Luxor
25. Gheneh
26. Cosseir
27. Berenice
28. Kobban
29. Aidhab
30. Sulakah
31. Suakin
32. Amour
33. Chirgre
34. Terfoni
35. Derr
36. Serra Gharby
37. Sedeuza
38. Tinareh
39. New Dongola
40. Handech
41. Old Dongola
42. Merawe
43. Gooz
44. Arewad
45. Fililik
46. Damei
47. Sbendy
48. Sudkim
49. Kamilee
50. Gimmoe
51. Aba Hadid
52. Obeydah
53. Haimer
54. Cobbe
55. Ril
56. Sennaar
57. Usheta
58. Imgellalit
59. Mandera
60. Arkecko
61. Geuster
62. Antalo
63. Tamano
64. Gondar
65. Alata
66. Sinnase
67. Gonderoo
68. Gonee
69. Bosham
70. Tergulet
71. Hayk
72. Zeyla
73. Hurrur
74. Dande
75. Somauli
76. Barburra
77. Somauli Vil
78. Soomaulee.

SOUTH PART.
1. Mukdeesha
2. Torra
3. Brava
4. Patta
5. Maleeda, or Melinda
6. Mombas, or Mombaza
7. Krelwa, or Quiloa
8. Mozambique
9. Mokamba
10. Maravi
11. Muenepanda
12. Moogrove
13. Parusoka
14. Emboque
15. Fort Zimbao
16. Quillimane
17. Lubo
18. Fort Sena
19. Reported Capital of Mocarango
20. Ladanne
21. Chicova
22. Zumbo
23. Zimbaoe
24. Dembararri
25. Mazappa
26. Manica
27. Sofala
28. Inhambane
29. Bakarrikarri
30. Melita
31. Mashon
32. Lattakoo
33. Malapeetzee
34. New Lattakoo
35. Pella
36. Zwellendam
37. George
38. Graaf Reynett
39. Utenhaze
40. Graham's Town
41. Fredericksurg.

MADAGASCAR.
1. Narreenda
2. Mohambo
3. Tananareivo
4. Tantamene
5. Manansari
6. Ancove
7. Mourondava
8. Ambatamb
9. Tilear
10. Manambatoo South.

Rivers.
a Nile
b Mareb
c Angrab
d Bahr el Azrek, or Blue River
e Maleg
f Bahr el Abiad, or White River
g Beloo
h Zebee
i Hawash
j Killeef
k Mombasa
l Quisimafugo
m Mongallo
n Teembo
o Chiechire
p Mangaza
q Murucura
r Aroveranga
s Tambezi, or Cuama
t Mazoe, or Arouanha
u Sofala
v King George's
w Mapoota
x Orange
y Nu Gariep
z Camtoos.

richly coloured; the beautiful Paradise Fly-catcher (*fig.* 752.) is not uncommon, and several others equally remarkable for their long tail-feathers, have been noticed by Le Vaillant. Hornbills of various species, and of a large size, abound in Southern Africa; yet the Parrots are confined to one species. But the most remarkable birds are the Honey-guides (whose economy we shall subsequently notice), and the Weavers, which live in vast republics under one common roof. The Sun-birds are very splendid, and present a refulgence of plumage surpassed only by the Humming-birds of the New World. Reptiles are not very numerous, but Insects according to Barrow are particularly abundant in the wooded districts. The other classes of Zoology have been much neglected.

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Paradise Fly-catcher.

The mammiferous groups of Africa have been arranged, by modern systematists, under the following genera and sub-genera. Many are peculiar to this continent, and others (*) extend to Asiatic India. Those of Madagascar are thus designated (†).

Simiadæ. Apes.
Troglodytes *Geoff.*
Colobus *Ill.*
Cercopithecus *Ill.*
Cercocebus* *Geoff.*
Cynocephalus* *Briss.*

Bakeena.
Papio* *Cuv.*

Lemuridæ. Lemurs.
Lichanotus *Ill.* †
Lemur *Ill.* †
Otolicnus *Ill.*
Cheiromys *Cuv.* †

Vesperilionidæ. Bats.
Pteropus* *Briss.* †
Nycteris *Geoff.*
Rhinolophus
Taphozous *Geoff.*

Chrysochloris.
Centetes *Ill.* †
Macroscelides *H. Sm.*
Rateilus* *Cuv.*
Potorius *Cuv.*
Lutra *Auct.*
Megalotis *Ill.*
Viverra
Mangusta*
Rhynsna *Ill.*

Proteles *Is. Geoff.*
Hyæna *Auct.*
Canis *Peron.*
Arvicola*
Myoxus*
Dipus
Bathyergus *Ill.*
Fodetes
Orycteropus *Ill*
Mimis *L.*

Phascochœrus
Styrax.

Antilopes.
Algocerus (subgenus) *H. Sm.*
Oryx *H. Sm.*
Gazella* *H. Sm.*
Antilope* *H. Sm.*
Redunca *H. Sm.*

Tragulus *H. Sm.*
Cephalophus *H. Sm.*
Nesotragus *H. Sm.*
Tragelaphus *H. Sm.*
Capra
Ovis
Damalis *H. Sm.*
Catoblepas *H. Sm.*
Bos *Auct.*

The Ornithological groups of Africa, distinct from those of Europe, furnish the following genera and sub-genera, many of which occur (generally with some modification of structure) in Southern India, and are designated thus (*).

Haliætus* *Sav.* Crab-eater.
Muscipeta* *Cuv.* Flycatcher.
Edolius* *Cuv.* Drongo.
Trichophorus* *Tem.* Hair-neck.
Malaconotus *Sw.* Bush Shrike.
Prionops *Vieil.* Ground Shrike.
Cebleppyris* *Cuv.* Caterpillar-catcher.
Drymoica *Sw.* Warbler.
Macronyx *Stephens.* Longclaw.
Certhilauda *Sw.* Creeper Lark.
Brachonyx *Sw.* Shortclaw.
Ploceus *Cuv.* Weaver.
Bupiestes *Sw.* Silkweaver

Vidua *Cuv.* Widow Bird.
Amadina* *Sw.* Finch.
Estrelda* *Sw.* Finch.
Dalophus *Vieil.* Doublecrest.
Lamprotornis *Tem.* Grakle.
Buphaga *L.* Beedeater.
Colius *L.* Coly.
Pogonias *Ill.* Toothbill.
Bucco* *L.* Barbet.
Geocolaptes *Burch.* Groundpecker. (*North Zool.* ii. 315.)
Leptocomus *Vieil.* †
Indicator *Vieil.* Honey Guide.

Centropus* *Ill.* Lark Cuckoo.
Corythaix *Ill.* Touraco.
Musophaga *Isert.* Plantain-eater.
Bucorvus* *L.* Hornbill.
Cinnyris* *Cuv.* Sun-bird.
Promerops* *L.* Hoopoe.
Vinago* *Cuv.* Pigeon.
Numida *L.* Crane.
Ortygis* *Ill.* Quail.
Struthio *L.* Ostrich.
Anastomus* *Ill.* Openbill.
Ibis* *Antiq.* Ibis.

SECT. III.—*Historical View of Africa.*

Africa, bold, rude, and perilous to the traveller, has always been held in the other quarters of the globe as a region of wonders, which only the most daring enterprise durst attempt to explore. The Greeks were well acquainted with the tracts on the Mediterranean, containing the once flourishing regions and states of Egypt, Carthage, and Cyrene; but whenever they reached their southern limit, they saw nothing but boundless sands scorched by the intensest rays of the sun. Hence it appears that the ancients drew the early hypothesis of a torrid zone, within whose limits it was impossible for men and animals to exist. Historians mention several attempts to penetrate it, which had the most disastrous issue. The first were prompted by views of conquest. Cambyses, after subduing Egypt, endeavoured to cross the Nubian desert into Ethiopia. He soon, however, experienced a failure of means for the support of his army. Elated with victory, and obstinate in his purpose, he refused to retreat; and the troops, after killing all their cattle, and then feeding on such scanty herbage as the ground afforded, came at last to the region of pure sand, on which was seen neither shrub nor blade of grass. In this dreadful extremity they began to devour each other; and at length Cambyses, struck with horror, renounced his enterprise. Another expedition, sent against the oasis of Ammon, never returned nor was heard of, and was believed to have been buried entire in that vast ocean of sand. These examples struck the world with terror, and prevented all further attempts, till the wild and enthusiastic daring of Alexander impelled him to seek a divine character at the shrine of Jupiter Ammon. The march was accomplished, but not without dreadful sufferings and extreme peril on the part of the army, and the danger of perishing before they reached the verdant groves and flowing rivulet which enclosed that celebrated temple.

If the mightiest monarchs were thus baffled in their attempts to overcome the barrier of these awful solitudes, it was not likely that private adventurers should be more fortunate. Yet the natural desire of man to penetrate into what is unknown and mysterious seems early to have had a powerful influence even upon individuals. Herodotus gives the narrative of an expedition undertaken by some young Nasamonians of distinction, inhabitants of a territory occupying part of the modern Tripoli. They described themselves as passing successively through cultivated tracts, then through a region inhabited by wild beasts, and lastly arriving at the great desert of sand. Having reached one of its verdant oases, and begun to pluck the fruit which was growing on the trees, they were surprised by a party of little black men, who took them prisoners, and conveyed them to a city far in the interior, tra-

versed by a river flowing from west to east. These particulars seem strongly to point at central Africa and the course of the Niger.

The Romans, when they had accomplished the final overthrow of Carthage, and established their empire over Northern Africa, would doubtless be impelled both by ambition and curiosity to make some enquiry as to what lay beyond. Their expeditions, however, having gained for them no extension of power, have escaped the notice of history. There occurs only in Ptolemy an incidental notice that a detachment under Septimius Flaccus, and another under Julius Maternus, had reached the country of the Ethiopians, after successive marches of three and of four months; and the latter called the region Agysimba: but what they saw and what they found there is nowhere reported.

The efforts made to explore the coast of the African continent formed the grandest object of ancient maritime enterprise. The voyages, therefore, undertaken with that view, have been a leading feature in the first volume of this work, which details the progress of geographical discovery (p. 18—30.). To the same part we must refer for the subsequent settlements formed by the Arabs, and for the expeditions undertaken in modern times to explore the interior of this continent, and the course of its great rivers (p. 63.). The chequered series of success and disaster by which this career has been marked, composes the most interesting chapter in the history of modern discovery (p. 74—5.). The successive efforts made by the African Association, by Parke, Hornemann, Denham, Clapperton, and Lander, have at length lifted up, from a great portion of this continent, the mysterious veil by which it had so long been covered.

Sect. IV.—*Social and Political State of Africa.*

The political constitutions of Africa are rude, and in general despotic. The unlimited power of the sovereign is in general checked only by the turbulence of aristocratic chiefs, not by any well-regulated freedom on the part of the people. Africa, however, is divided into an almost infinite variety of states, whose political system can only be understood by considering each in detail.

Sect. V.—*Industry and Commerce in Africa.*

The processes of agriculture and manufactures, in Africa, are performed generally in a rude and imperfect manner. The soil, however, is cultivated almost throughout, to a greater or less extent; and some fine fabrics, particularly those of cotton, cloth, mats, and gold ornaments, are very widely diffused.

Africa has scarcely any trade, except that which is carried on overland and across its oceans of desert, by caravans, consisting chiefly of camels. It is truly astonishing with what facility these companies now make their way to the remotest interior of the continent, in defiance of obstacles which might have been deemed insuperable. By these immense journeys, they procure considerable quantities of gold and ivory; but the importance of these articles is merged in a cruel and iniquitous traffic, of which Africa has always been the main theatre. Other parts of the globe have for ages depended upon its oppressed and unfortunate inhabitants, for supplying their demand for slaves. Whoever, throughout Africa, has the evil power of selling any of his fellow-creatures, is sure to find purchasers who will give in exchange the best products of Europe and the East. Some are condemned to slavery under a criminal code, framed by legislators who make it a study to multiply the number of such offences as may be made punishable in this lucrative manner; others are captives taken in war; but a large proportion are procured by mere slave-hunting expeditions, undertaken even by the most civilized states against neighbours whom, with little reason, they account more barbarous than themselves. The number thus conveyed across the desert, to fill the harems of Turkey and Persia, has been rated at 20,000. These, however, serve merely as domestic slaves; and, though subjected to many humiliations, they are, on the whole, mildly treated. A much severer lot awaits those who, from the western shores of Africa, are carried off by the polished people of modern Europe. After suffering through the passage under a confinement and pestilential air which prove fatal to a large proportion, they are sold to taskmasters whose sole object is, under a burning sun, to extract from them the utmost possible amount of labour. It is calculated that, during the flourishing period of the slave trade, 80,000 were annually transported across the Atlantic. At length, however, the wrongs of Africa were heard; Britain, roused by the voice of some generous philanthropists, took the lead in the cause of humanity. The resistance was powerful, and it occasioned many years of debate, signalised by the long labours of Wilberforce, Clarkson, and other friends of Africa, till, in 1806, Mr. Fox moved and carried the bill for the final abolition of the trade of importing slaves into the British colonies. It has since been declared felony for a British subject to engage in this trade. America and France afterwards followed the example; and thus the export of slaves from the northern part of Guinea has been in a great measure prevented; though the numbers still procured from the southern quarters of Benin and Congo, by the Spaniards and Portuguese, are but little diminished.

This vast continent is almost universally in a state of barbarism: yet in ancient times its

northern states rivalled Europe in civilisation. Egypt and Carthage, when in their glory, ranked among the most civilised and opulent states then existing. Even after the first ravages of the Saracens, learning and science distinguished the splendid courts established in the west of Barbary. The continued influence, however, of a gloomy superstition, and the separation caused by it from all the refined modern nations, have induced among these states a general relapse into barbarism. The population of the continent may now, in a large view, be divided into Moors and Negroes. The Moors, including the descendants of the original Arab invaders, and those whom conquest and religion have assimilated with them, fill all northern Africa and the Great Desert. They reach the banks of the Senegal and the Niger, which may be considered as the boundary of the two races, though they mingle and alternate on the opposite sides, where sometimes one, sometimes another, hold the chief sway. The Moors are a rough roving race, keeping numerous herds, chiefly of camels, with which they perform immense journeys through the most desolate tracts, and across the greatest breadth of the continent. Africa is indebted to them for all the literature she possesses; at least, few of the Negroes can read or write who have not learned from them. The Moors, however, at least all that scour the desert, are a race peculiarly unamiable. A furious bigotry, joined to the most embittered hatred of the Christian name, renders them mortal foes to every European traveller who falls into their power. The Negroes on the contrary, though inferior in arts and attainments, are generally courteous, gay, and hospitable. Like all barbarous nations, they are fond of war, and cruel to their enemies; but their domestic intercourse is friendly, and they receive with kindness the unprotected stranger. They are led away with fantastic superstitions, charms, witchcraft, ordeal, &c.; but these errors never impel them to hate or persecute those who entertain the most opposite belief. Their external aspect is well known, being marked by a deep black colour, flat nose, thick lips, and coarse hair like wool. The Moors are deeply embrowned by the influence of the sun, but have not the least of the Negro colour or aspect.

SECT. VI.—*The African Languages.*

A general view of the African languages may here be most advantageously introduced. For this and the two remaining divisions, a summary notice may suffice, as most of the idioms included in them are as yet too imperfectly known to admit an ethnographical classification equally definite with those of Asia and Europe. This is the less to be regretted, since few if any of the nations properly belonging to those divisions can be said to possess a literature. Indeed, what native people south of the equator can be said to have a cultivated language?

The African languages hitherto known may be classed in five branches:—1. The languages of the region of the Nile. 2. Those of the region of Atlas. 3. The languages of maritime Nigritia. 4. Those of South Africa. 5. Those of the Soudan, or Interior Nigritia.

1. The languages of the *region of the Nile* may be classed in the following manner, of course excluding those spoken by nations belonging to the Shemitic family, as the Abyssinians, who speak the Gheez, the Amhara, and other idioms of the Abyssinian branch; and the Turks, who are of Asiatic origin:—The Egyptian family, including the ancient Egyptian, and the modern Egyptian, or Coptic. The Nubian family. The Troglodytic family. The Shiho-Dankali. The Chillouk. The Dizzela. The Tacazze-Shangalla. The Cheret-Agow. The Agow-Damo. The Gafate. The Guragne.

2. The languages of the *region of Atlas*, including the Amazigh, Ertana, Tibbo, Chellouk, and Guanche.

3. The languages of *Maritime Nigritia*. Under this term are comprehended all the languages spoken in the country called by the French Senegambia, and in Guinea. The following are the principal in this group:—1. The Foulah. 2. The Mandingo family. 3. The Wolof, or Iolof, with various others. 4. The Ashantee family. 5. The Dagwumba. 6. The Ardrah family. 7. The Kaylee family.

4. The languages of *South Africa*, amidst the uncertainty and obscurity that still envelope them, may be classed in the following families:—1. The Congo family. 2. The Caffre family. 3. The Hottentot family. 4. The Monomotapa. 5. Gallas; besides some independent languages, as the Somauli, and the Mohenemougi.

5. The principal languages of Interior Nigritia, or the *Soudan*, are, the Tombuctoo, the Haoussa, the Mandara, the Darfur, the Wassanah, the Mahee, and the Eyeos, or Eyo.

CHAPTER II.

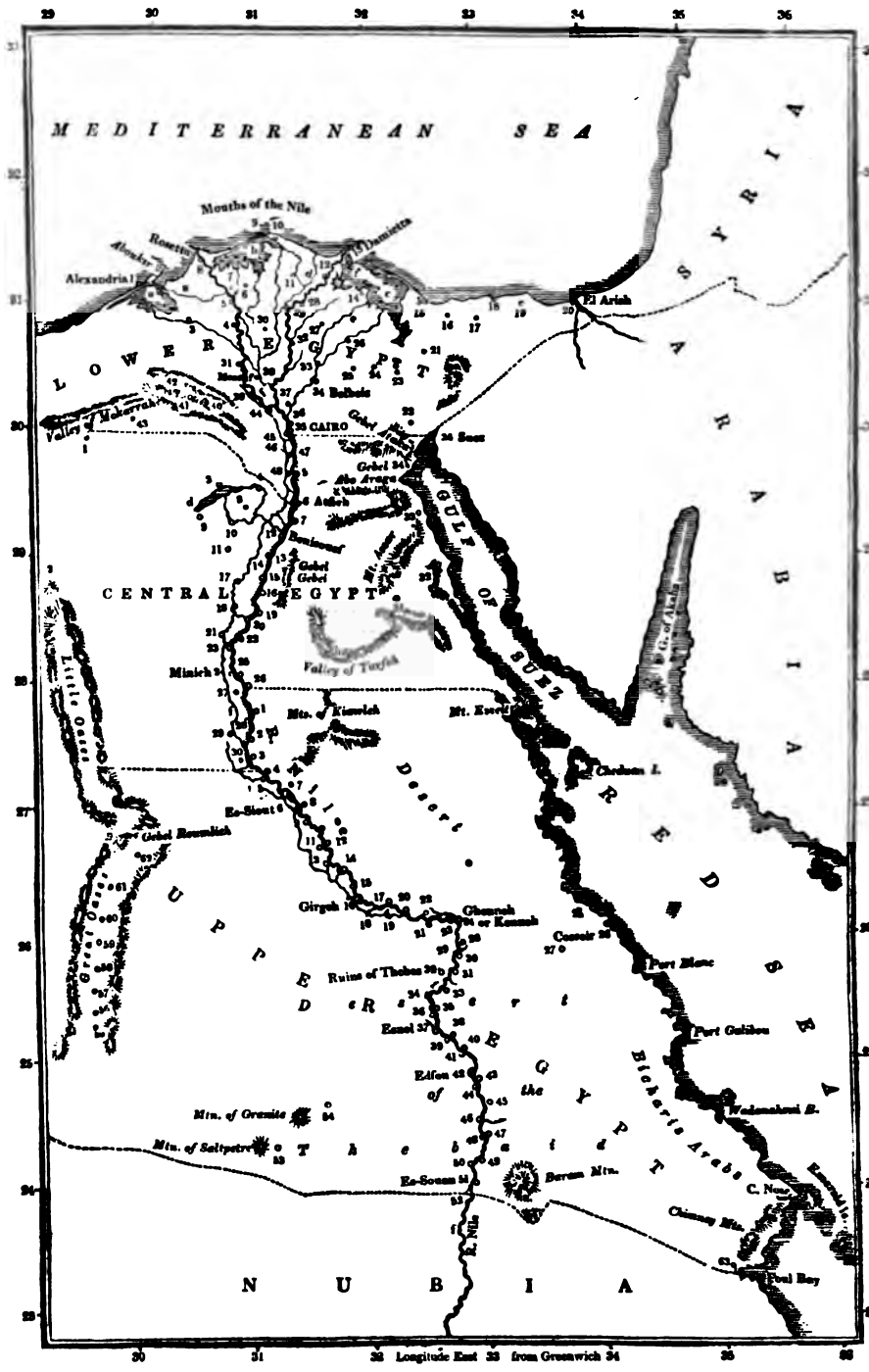
EGYPT.

The whole north-eastern part of Africa consists of a mighty expanse of desert sand, extending for upwards of a thousand miles in each direction. The chains of arid and rocky mountains by which it is traversed give only a more rugged and dreary character to this immense waste. One vast feature alone breaks its terrible monotony. From the high chains of Abyssinia, and from the still loftier Mountains of the Moon that traverse central Africa, descend numerous and ample streams, which, long before entering Egypt, unite in forming the Nile, a river of the first magnitude. Although the Nile, in its whole progress through this desert, does not receive the accession of a single rivulet, it brings so vast an original store as enables it to reach and pour a mighty stream into the Mediterranean. For many hundred miles in the upper part of its course, confined between high and rocky banks, it is merely bordered by a brilliant belt of fertility, the sandy waste stretching indefinitely on both sides: this is Nubia. After traversing the barrier of the cataracts, it passes through a broader valley between mountains of some height, and on its banks are many shaded or inundated tracts, which yield products of considerable value: this is Upper Egypt. Emerging from these mountains, the Nile enters a flat and extensive plain, where it separates, and by two great and divided streams, with various intersecting branches, enters the Mediterranean: this is Lower Egypt. In this last part of its course, the Nile is nearly on a level with the district which it intersects, and, when swelled by the autumnal rains of central Africa, overflows it entirely. The waters begin to rise about the 18th or 19th of June, attain their greatest height in September, and subside as gradually as they rise, and within about an equal space of time. The land thus covered with the fertilising alluvial deposit, collected during so lengthened a course, becomes the most productive perhaps on the face of the globe; and, notwithstanding its limited extent, and the mighty wastes on which it borders, has always maintained a numerous population.

Thus Egypt exists solely by the Nile, and within the sphere of its action. The encircling desolation is only broken, to the west of Upper Egypt, by one large valley called Fayoum, into which the mountains open; and by several oases, or cultivated spots, which at wide distances break the uniform waste of sand.

Sect. I.—*General Outline and Aspect.*

Egypt, consisting entirely of the Nile, its branches, and its banks, must be measured in length by the course of that great river. The coast which, nearly in a straight line, unites the mouths of the two great branches, may be fixed about the parallel of 31° 30′; while Syene, beyond whose cataracts Nubia begins, is in 24° 5′. This gives an extent of 7° 25′, or about 520 miles directly north and south, and the distance is somewhat augmented by the bending of the river; Syene being about two degrees east of Rosetta, and one east of Damietta. The breadth is much more vague. The sea-coast which forms the base of the Delta from Alexandria to the extremity of Lake Menzaleh, will measure upwards of 150 miles; but in ascending to Cairo, not more than ninety miles from the sea, the cultivated tract tapers almost to a point; and through the whole of Upper Egypt seldom exceeds the breadth of four or five miles. Beyond this space, the country passes, by insensible yet rapid gradations, into wild wastes, the domain of wandering Arabs. Egypt has always claimed as her own those rocky and sandy tracts, about 100 miles in breadth, which stretch from the Nile to the Red Sea. Although, however, she anciently formed a caravan route across them to the great sea-port of Berenice, it does not appear that any attempt was ever made to bring it into a civilized and cultivated form. On the west the transition has been still more abrupt, into the pathless tracts of central Africa; for even the oases, strong in the surrounding desolation, have seldom owned any permanent subjection to the power which ruled over Egypt. The boundaries, like its dimensions, are very undecided. The position of this country is, in a remarkable degree, both central and insulated. It is placed amidst others which have been eminently distinguished in history, yet is separated from each of them by broad expanses of sea and desert. On the north the Mediterranean divides it from Greece, allowing its vessels, by an easy navigation, to reach the coast of Syria, of Asia Minor, and even of Italy. To the east the Red Sea separates it from Arabia, except at the desert isthmus of Suez, beyond which are Syria and Palestine, the countries with which Egypt has always maintained the most important political relations. To the south is Nubia, with all those wide tracts comprehended by the ancients under the vague name of Ethiopia. Notwithstanding its proximity and close intercourse, the thinness of its population, and the difficulty of access have prevented that region from ever being fully conquered or incorporated with Egypt. On the west, Egypt is separated from Barbary by immense wastes of trackless deserts, which prevent every approach to national union. Caravans, indeed, by indefatigable activity, have formed a route across it; but an army has never entered it without encountering the most overwhelming disasters.


MEDITERRANEAN SEA
Mouths of the Nile
Rosetta
Damietta
Alexandria
El Arish
SYRIA
ARABIA
LOWER EGYPT
CAIRO
Suez
GULF OF SUEZ
CENTRAL EGYPT
Valley of Tanjah
Mt. Kisseh
Mt. Esel
Desert
Girgeh
Ghennah or Kennah
Ruins of Thebes
Esnel
Edfou
Mtn. of Granite
Mtn. of Saltpetre
Es-Souan
Berum Mtn.
Port Munc
Port Galeb
Red Sea
Bischarie Arabs
NUBIA
Longitude East from Greenwich

Sect. II.—*Natural Geography.*

Subsect. 1.—*Geology.*

In Upper Egypt, three geological regions can be distinguished:

1. The most southern, the granite region; which extends from Philæ through the cataract district to Syene. It affords, besides granite, also syenite and some other crystalline primitive rocks. The finest granites and syenites are red and highly crystallised; and remarkable for their durability and the fine polish which they are capable of receiving. Colossal statues, pillars, obelisks, and even whole temples, are constructed of these beautiful rocks. It is said that the third pyramid of Gizeh, and also that of Mycerinus, were originally cased with slabs of granite.

2. The most northern, the limestone region, extends some days' journey south of Thebes. This limestone was formerly much used as a building material. The catacombs of Thebes are situated in this limestone.

3. The third, or sandstone region, lies between the two former, and extends from Syene northwards to Esne. This sandstone is by some authors referred to the grès, or sandstone of Fontainebleau, the paving-stone of Paris; by others to the molasse of Switzerland: but all are agreed in considering it as a comparatively recent deposit. Its colours are white, gray, and yellow; it is very soft and easily worked, and the buildings constructed of it would probably not have long resisted the weather, had they not been covered with a coloured varnish. The great temples, and many pillars and obelisks, are of this sandstone, but it does not appear ever to have been used in building private houses.

4. The whole of Egypt to the north of the limestone, that is, the Delta region, is principally composed of alluvium deposited from the waters of the Nile.

Subsect. 2.—*Botany of Egypt, Nubia, and Barbary.*

We shall, with Mirbel, consider Egypt, Nubia, and Barbary, as the Southern Transition Zone, already spoken of: the Mediterranean dividing it from the Northern Zone.

From the Red Sea to the Atlantic Ocean, and from the Tropic of Cancer to the Mediterranean, the greater part of the soil of Africa presents nothing but deserts, interspersed with oases.

Many of the springs afford only brackish water, and the rivers and torrents rarely reach the sea; being absorbed by the sands or dried up by the heat. The Nile is the only navigable river; and the alluvial soil which its periodical overflowing deposits on the shores and over the plains of Lower Egypt, with the hills on the coast of Cyrenaica, some provinces of Fezzan, and the western part of Barbary, which is intersected by the range of Mount Atlas and its ramifications, are almost the only productive parts, and their fertility is truly astonishing.

The winter temperature of the coasts falls as low as + 7.5° Réaum. at Alexandria, Rosetta, and Damietta; but, in general, it oscillates between + 13 and 18°. At some distance from the sea, the climate of the plains is scorching at all seasons. Still it sometimes happens in winter, that the violent northerly winds do sink the temperature for a very short period to + 6°, + 5°, and even + 2°, and zero, in latitudes adjoining the tropics.

At Cairo (lat. 30° 2′) the mean annual temperature is + 22.4°; that of winter,

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References to the Map of Egypt.

LOWER EGYPT.
1. Alexandria
2. Aboukir
3. Kouch
4. Daharieh
5. Rahmanieh
6. Sandeleh
7. Foua
8. Rosetta
9. Bourlos Fort
10. Beltim
11. St. Gemiane
12. Kadim
13. Damietta
14. Menzaleh
15. Jineh
16. Katieh
17. Behcireh
18. Ras el Kasaroun
19. Mesoudiah
20. El Arsh
21. Bir Makdal
22. Agerood
23. Heroopolis (ruins)
24. Sabbe Biar
25. Abu el Cheib
26. Tel Hakhous
27. Beidah
28. Mansoura
29. Semenhoud
30. Tanta
31. Aalkam
32. Melet Ghamr
33. Tel Basta
34. Belbeis
35. Cairo
36. Boulak
37. Kelioub
38. Menouf
39. Wardan
40. Convent of St. Macaire
41. Ambabichai
42. Baramais
43. Mahhadje
44. Gezaiah
45. Gizeh, or Djizeh
46. Abousir
47. Ruins of Memphis
48. Tahmah.

CENTRAL EGYPT.
1. Mokarrah, or Mogarra
2. Behneee
3. Medinet Nimroud
4. Tanieh
5. Kamazeh el Sogheir
6. Atfieh
7. St. Antony
8. Medinet el Faioum
9. Kasbr Keroun
10. Aboo Gandir
11. Rnian
12. Bemisouef
13. Bibbe
14. Harehehent
15. Pesbn
16. Sakieh
17. Barkah
18. Behnaceh
19. Ibrahim
20. Abou Girgeh
21. Beheneee
22. Sheik Hassan
23. Samelood
24. Minieh
25. Souadi
26. Matahareh
27. Beni Obeid
28. Melawi el Arish
29. Dalgeh
30. El Cussieheusa.

UPPER EGYPT.
1. Deir Abou Hennis
2. Hagg Kandil
3. Cassieh
4. Harabe
5. Manfalout
6. Es Siout
7. Arab Halem
8. El Motmar
9. Sadfeh, or Idfeh
10. Kau el Kebir
11. Tahta
12. El Harideh
13. El Maragat
14. El Akhmim, or Ekhmim
15. El Medshieh el Nedo
16. Girgeh, or Dirjeh
17. El Teheman
18. El Kerbeh
19. Fashhout
20. El Gezu
21. El Wafa
22. El Gahieh
23. Dendera
24. Ghennieh, or Kench
25. Old Cosseir
26. Cosseir
27. El Ahmar
28. Keft
29. El Keraie
30. Ghouft, or Koua
31. Hachachieh
32. Ruins of Thebes
33. Beiadieh
34. Rizacat
35. Debaibieh
36. Asfoun
37. Esneh
38. El Hibeh
39. Koum Mereh
40. El Kab
41. Koum el Ahmar
42. Edfou
43. Redesieh
44. El Kasr
45. Chebeikeh
46. Reeras
47. Koum Ombou
48. Bibaan
49. El Akhabeh el Sagireh
50. Koulianieh, or Abou Aziz
51. Es Souan
52. Es Thellaale-el Nil, or the Cataracts
53. Dongou
54. Gourgour
55. Mourbes
56. Betris
57. Darragim
58. Rosaitah
59. Sheik Allet
60. Boulak
61. El Kargeh
62. Ain Diseh
63. Berenice.

Lakes.
a Mareotis
b Bourlos
c Menzaleh
d Birket Keroun.

Rivers and Canals.
a Alexandria Canal
b Asarah Canal
c Melik Canal
d Ashtoun Canal
e Moez Canal
f River Nile.

+ 14.7°; in spring, + 23.1°; in summer, + 29.5°; in autumn, + 21.9°: in the hottest month, + 29.9°; in the coldest, + 13.4°.

At Algiers (lat. 36° 48') the annual mean is + 21.1°; in winter, + 16.4°; in spring, + 18.7°; in summer, + 26.8°; in autumn, + 22.5°: in the hottest month, + 28.2°; in the coldest, + 13.4°.

Westward of the Red Sea lies Egypt, a spacious valley, bounded by mountains and deserts. At the period of the greatest heats, the traveller who for the first time visits this country, which is so celebrated for its fertility, feels great surprise: his disappointed glances only rest on a vast plain, enclosed by whitish and naked mountains, and sprinkled with a few trees and withered herbs. At the summer solstice, the swelling of the Nile commences, and about the autumnal equinox the country is so inundated as to resemble a great lake, above the waters of which appear, here and there, Date trees, Figs, Acacias, Willows, Tamarisks, &c. At the approach of the winter solstice, the waters gradually retire, and vegetation occupies, in succession, the spots that become dry. Upon this damp and muddy soil, splendid harvests rise, which have cost nothing more than casting the seed on the ground. All kinds of grain are ripe before the month of May, when returning heat destroys the verdure. By the close of December, or the beginning of January, the trees are stripped of their foliage; scarcely all the old leaves being detached, when the new ones are expanded. The exhalations that rise from the Mediterranean fall again in rain on the shore; while in the interior, the showers are few and light. The clouds which are driven by the north wind towards the high mountains of Africa, and are dissolved in the flaming atmosphere of Upper Egypt, pass away unperceived: nothing dims the clearness of the sky. "What will you say," so writes Hasselquist to Linnæus, "when I tell you that there are trees which have existed here for 600 years, on which not six ounces of water have ever fallen." The country would be uninhabitable during summer, if the sea-breeze, accompanied by abundant dews, did not moderate the heat of the atmosphere. The traveller may wander for many days in the deserts of Egypt, Nubia, Libya, and Fezzan, and the northern part of Bornou, without finding a drop of water, or the smallest trace of vegetation. The soil is sometimes formed of pebbles and gravel; but oftener of a calcareous shifting sand, coated with saline efflorescence. On its surface are shells, marine sponges, and petrified trunks of trees; all attesting the ancient revolutions of our globe. At intervals, ridges of calcareous mountains, quite destitute of vegetable soil, cut up the arid plains in different directions. Some of the districts which are during winter bedewed with rain, produce, at that season, a vegetation which suffices for the nourishment of numerous flocks; but so soon as the great heats return, every appearance of verdure is lost. How, indeed, can vegetation resist an atmosphere, of which the temperature sometimes rises to + 50°? The low spots, and the beds of the torrents where humidity lingers longest, produce some shrubs and under-shrubs, as the Tamarisks (*Tamarix gallica*, *africana*, and *orientalis*), the Caper plant, some Cassias, Acacias, Mimosas, &c. The saline soils again present the harder and thorny species, Salsolas, Traganum, Calligonum; and succulent plants with thick and fleshy leaves, as Salicornias, the Mesembryanthemum copticum, crystallinum (*fig.* 754.), and biflorum; the organization of the latter permitting them to retain in their substance an abundant portion of moisture, even during the period of the greatest drought. These plants are cropped by the camel, that pattern of humble and patient endurance. Lastly, the oases, which are moistened by springs of living water, like fertile islands in an ocean of sand, produce the Date, the Doum (*Crucifera thebaica*), which grows as far as the coasts of the Bight of Benin, the Acacia vera, and other species of the same genus, also affording gum; with a tree of the family of Coniferæ, which many travellers have taken for the yew, but which is probably a species of Juniper or Thuja. The Orange, Citron, Banana, Olive, Pomegranate, Peach, and other fruit trees, with Rice, Wheat, Barley, &c., are cultivated in these spots.

Mesembryanthemum Crystallinum.

Egypt also produces the Christ's Thorn (*Zizyphus Spina Christi*) the Chaste tree (*Vitex Agnus castus*), Salvadora persica, the Oleander (*Nerium Oleander*), and other woody Asclepiadeæ, the Sycamore Fig (*Ficus Sycamorus*); Acacia gummifera, nilotica, farnesiana, Lebbeck, albida, Sejal, heterocarpa, senegalensis; Mimosa Habbas, or M. polyacantha; the Prickly Fig (*Cactus Opuntia*), &c. In some of the gardens at Cairo grow the Weeping Willow (*Salix babylonica*), S. egyptiaca and subserrata, the White and Black Poplars, the Cypress, the Cassia Fistula, Anona squamosa, the Tamarind, &c., with the European Elm, which only attains the height of a shrub. Formerly the sacred Bean of India (*Nelumbium speciosum* Willd., *Cyamus Nelumbo* Smith) displayed its broad foliage and splendid flowers

on the waters of the Nile: it has now disappeared. Representations of it still exist on the ruins of ancient monuments. Can this lovely plant, which is indigenous to the East Indies, have been an exotic in Egypt, and only preserved there by cultivation? This is very probable.

The mountains of small elevation in Cyrenaica produce abundantly the Carob tree, the Olive, Myrtle, Lentisk, Arbutus or Strawberry tree, and Juniperus phœnicea: their summits are clothed with thick forests of a Thuja, which is doubtless Fresnella Fontanesii (*Thuja articulata* Desf.) Oaks, which are so abundant upon Mount Atlas, the Date and Prickly Fig, are wanting here.

The Atlas mountains, whose highest summits do not exceed 7000 feet according to Mirbel, 11,400 feet according to recent travellers, consist of two parallel chains running east and west, between lat. 28° and 33°. They divide Barbary from the great desert of Sahara. The range nearest the coast, refreshed by the sea breezes and frequent showers, is covered with forests. The other, lying towards the desert, is dry and nearly barren. Some large intermediate valleys, which are watered by a great number of rivers and streams, are surprisingly fertile. In summer, the air is so hot and oppressive in the southern districts, that the inhabitants quit their dwellings to live under the shadow of the Palm trees.

Though the plains of the northern parts be generally sandy, they display great richness of vegetation wherever they are not quite destitute of humidity. Winter is to them the season of verdure; a gentle degree of warmth, accompanied by rain, hastens the growth of a multitude of plants, and flowers spring up in the open country, as they do in our climate at the return of spring. But when the sun draws near the tropic, rain ceases, the rivers dry up, the atmosphere becomes scorching, the leaves of the trees lose their verdure, and every plant is burnt up under foot.

The forests of Barbary occupy the higher ranges of Mount Atlas. They are chiefly formed of the Cork tree and Ilex, Quercus obtecta, pseudo-suber, coccifera, pseudo-coccifera, &c.; the Q. Ballota, of which the agreeably tasted acorns are eaten by the natives, the Aleppo Pine (*Pinus halepensis*), Fresnella Fontanesii, Juniperus phœnicea and lycia, and the Cypress. M. Desfontaines, to whom science is indebted for an excellent work on the vegetation of the states of Algiers and Tunis, has rarely seen the Common Oak (*Quercus Robur*), the Alder or the Poplar, and Ash. The valleys and low hills are fringed with Wild Olives, Pistachio trees (*Pistachia Terebinthus*, *P. vera* and *atlantica*), with the Arbutus, the Shrubby Jasmine, the Bay tree, the Myrtle, Rhus pentaphyllum, Coriaria, and other species, with Zizyphus Lotos, and Spina Christi, with the Chaste tree, the Viburnum Tinus, Osyris alba, Celtis australis, &c. The streams are bordered with Tamarisks; T. gallica, germanica, and africana; Salix tridentata, pedicellata, and monandra; with the Oleander, &c. The Palmetto (*Chamærops humilis*) abounds on all the uncultivated eminences; Pinus Pinea and Pinaster grow on some parts of the coast; while forests of the Aleppo Pine (*P. halepensis*) skirt the boundaries of the kingdom of Algiers.

The vegetation of Northern Africa, of which 2100 to 2200 species are now known, differs little from that of the northern and eastern shores of the Mediterranean. Of 344 woody plants, that is, about 284 shrubs and 60 trees, which Northern Africa possesses, about 100 are peculiar to the country; 16 to 18 are part of the equatorial Flora; the others, that is, more than two-thirds of the whole, have been remarked in Southern Europe or in the Levant, before or after M. Desfontaines's expedition into Barbary; and among these are reckoned thirty-nine trees of lofty or middling stature. Many of the herbaceous plants are also common to Europe or the Levant. They are certainly mingled with a great many African species; but the latter have almost all their generic types in the Flora of Europe.

In fine, there are no less than half the species, whether woody or herbaceous, of Egypt, Libya, or Western Barbary, that also grow in the other Mediterranean countries belonging to the Transition Zone.

The Coniferæ and Amentaceæ contribute twenty-four trees to Northern Africa; the Leguminosæ, eleven; the Terebinthaceæ, five or six; the Rosaceæ, four or five, &c. The Ricinus (*fig.* 755.), or Castor-oil plant, which only appears a tall herb in the South of Europe, grows to a tree on the southern shores of the Mediterranean.

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Castor-oil Plant.

The proportion of trees and shrubs to the annual, biennial, and perennial plants is about one to six.

That of perennial to annual and biennial plants is seven to nine. Here the proportion is increasing, while in the other parts of the zone it is decreasing. This anomaly is, perhaps, more in appearance than in reality, and would probably disappear if we knew all the herbaceous plants of Mount Atlas; for it cannot be doubted that, on mountains, the number of perennial greatly exceeds that of annual plants.

The plants collected by the late Dr. Oudney, from Tripoli to Mourzouk, are, with the exception of a few species, identical with those of Barbary.

Of all the coast provinces of Africa, Lower Egypt possesses the largest number of equatorial plants; which must be attributed, not only to the vicinity of Arabia, but to the presence of the Nile, whose waters, descending from a country very near the equator, necessarily waft, along with the valuable mud that they deposit, a great number of seeds, many of which grow and propagate themselves under the burning sky of Egypt.

Of Egypt, Forskāl, a celebrated writer on the botany of that region, says, that it has little in common with other countries. "All that is seen in it excites admiration, whether the works of men or of nature. Lofty mountains are unknown there, and alpine productions are consequently banished. The absence of woods excludes a vast number of flowers; nor do those plants flourish which properly belong to rivers and lakes. The cold of the northern regions forbids the growth of tender exotics. Egypt, on the contrary, consumes them with unwonted heat. The same advantages of climate and soil, which favour native plants, banish foreign ones. Every kind of vegetable cannot subsist without rain, without the vapour of springs, rivers, or marshes, without the cool shades of mountains and woods. They are not all qualified to endure the diurnal heat by the periodical refreshment of the nocturnal dew. In the dry soil of some parts of Egypt, seeds of other climes quickly perish; again, plants coming from a dry soil ill endure the inundation and marshy state of other parts. The plants of Egypt are fitted to exist by a peculiar vegetative economy. Their texture is loose, and, as it were, plethoric; so that their proper aliment is prepared in continually distended veins. The widely opened mouths of the vessels receive the copious dews; and the leaves perform the functions of so many roots. Hence, great transpiration is excited; and the moist roots enable them to endure the summer sun, and to pass from the extreme drought of summer to the humidity of a three-months' flood. Besides, the inverted order of things that prevails here, covers the Egyptian fields in winter with verdure and blossom, while the plants of Europe are undergoing a state of repose. Sandy deserts, destitute of moisture, insulate the vegetation of Central Africa, and prevent its extending to Europe. Seeds, too, which drop accidentally on the earth, and are subsequently covered by the sediment of the river, are never likely to be developed. This is the reason, too, why the entomology of Egypt is so poor. The eggs and chrysalides of insects are smothered by the stagnant waters; some few families retire to the trees and loftier shrubs; but there are not enough of these sheltering spots to protect them from the scorching atmosphere. In like manner, the birds, which inhabit mountains and groves, avoid these exposed and thirsty fields."

The northern plants, therefore, most of which belong to mountains or lakes, are entirely absent. A few only, scattered, and changed in appearance, show themselves as strangers. Egypt arms with thorns the Colutea and the Carduus; while Sweden points the leaves of the Juniper and Fir. The one abounds with Dates and Sycamore trees; the other with Willow-grounds. The Nile is clothed with luxuriant reeds; Sweden maintains an endless race of Carices. The entire absence of Fungi, in the moist soil of Egypt, is remarkable; Mosses and Lichens are extremely rare, and chiefly exotic.

The plants of Egypt may, therefore, be distributed into two classes; of which the principal feature is the presence or absence of water.

The irriguous or cultivated plants, all of which are exotic, owe their introduction and propagation to human industry. The number of fruit trees by no means answers to the culture and fertility of the soil. The most flourishing of these are, the Date and Sycamore; which, perhaps, have the greatest power of sending their roots deep into the ground, in quest of latent moisture. The spontaneous plants belonging to this division are seen either near the Mediterranean or the banks and islands of the Nile; or they occupy the edges of fields and gardens which are artificially irrigated.

Every region, almost every province, has its peculiar Botanic Garden, in which plants spontaneously thrive, being particularly favoured by the soil. The peninsula Ras-et-tin is distinguished from the shore of Alexandria by eminences, fields, fig plantations, fosses, salines, and a variety of shady open places. Thus, plants of very different kinds are collected in a small space, each having appropriated to itself its own fit habitation. What is still better, in this place the botanist may pursue his researches with security; the situation defending him from the attacks of robbers. The portion of the peninsula which joins it to the land is occupied by dwellings; the rest is bounded by the sea, and the Arabs are afraid either to cross the water or to go through the city.

Of noxious and useless plants, there are either none, or they are very few, and occupy remote spots; the reason for which is obvious; the unceasing cultivation of the more valuable plants entirely excluding the weeds. To the conveniently situated lands no rest is allowed; as crop after crop is carried away, the ground is turned up with the plough, till every weed is extirpated, and the thick growth of the cultivated plants choke the last straggling native of the soil. Should any remain, in a field not immediately sowed, they fail not to be destroyed by the heat.

The desert plants, again, form a strong contrast to the former class; being distinguished by their poor and parched growth, which almost seems to bespeak one's compassion. Even the dreariest spots are not wholly destitute of vegetation, about fifty species having fixed

their abode there, and affording a maintenance, though of the slenderest and coarsest kind, to the flocks of the wandering Bedouins. These plants seem to partake of the nature of the soil which supports them, being arid and crustaceous; their hollow leaves, however, often retain the moisture of the nightly dews and winter clouds, which periodically call them into life. They are growing till the end of March, and disseminate their seeds during April and May; but before the summer solstice arrives, they are almost all withered.

The Date is the principal object of cultivation; the trees are planted at intervals of eighteen feet, and after six years they bear fruit. When they are young and tender, it is customary to cover them with mats, so as to cause the leaves to form themselves into a trunk; every year two rows of boughs are cut off round the tree, so that their age is easily computed.

But of the plants of Egypt, a few, for which that country is rendered remarkable, must be here noticed; and among them none is more worthy than the Papyrus (*fig.* 756.), commonly called the Papyrus of the Nile, or of Egypt; because, though apparently of rare occurrence in that country, it was there first employed in making paper. It is the *παπυρος* of Theophrastus and of Dioscorides; Papyrus of Pliny, and Bera of the Egyptians; in Syria, Babier (whence come the words Papyrus and Paper); Cyperus Papyrus of Linnæus, and P. antiquorum of Link. It is not an unfrequent inmate of the stoves of our country; where, if the roots be kept constantly moist, it flourishes, and is highly ornamental. The main stem, surrounded at the base by a few short leaves, is bluntly triangular, and attains a height of ten or twelve feet, bearing a large compound umbel of slender, feathery, gracefully recurved, and very numerous flower-stalks, with inconspicuous blossoms. It is from the delicate and white pith which fills the interior of the stems of this fine plant, that the ancients prepared their paper. To accomplish this, after having removed the epidermis, they cut the spongy part into thin slices, which they steeped in the water of the Nile, or into water slightly imbued with gum; after which, two layers were placed one above another, taking care to arrange them in contrary directions, that is, alternately breadthwise and lengthwise, many layers being often required to make one sheet of paper. Then the article was dried, and subjected to a strong pressure, and finally smoothed with a tooth, or a piece of polished ivory. On this kind of paper, most of the ancient manuscripts were inscribed; especially those which have been brought to light by the excavations at Herculaneum and Pompeii.

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Papyrus.

Other accounts, indeed, of the ancient mode of preparing paper from the Papyrus are a good deal at variance with what is above given, and with what we know of the structure of the plant in question; which is by no means composed of layers, but is an uniform mass of very cellular pith, covered by the epidermis. Thus, according to Theophrastus, "For making paper, the stoutest stems of the Papyrus were selected; the thin layers were divided, the central ones being the finest, whitest, and most esteemed. After these were spread out, and the irregularities reduced, the muddy water of the Nile, which somewhat partakes of the nature of paste, was sprinkled over them; many leaves being requisite to form one sheet of paper. It was common, after pressing them, to beat them with a mallet, to dry and polish them; all these preparations being essential, before the paper would bear writing; and for such as was destined to keep a long time, the precaution of rubbing it with cedar oil, which imparted to it the incorruptible nature of that tree, was also adopted." This account is, in all probability, applicable to the paper of the ancients made from trees inhabiting marshy situations, such as the Willow, Poplar, &c.

The sacred Lotus of Egypt is a plant that has elicited much controversy, and it does appear that, in different and even the same countries, the inhabitants called very dissimilar plants by the name of Lotus. According to Shaw, in the plate that represents the mosaic pavement at Prœneste, relating to some of the animals and plants of Egypt and Ethiopia (and of which a full history is given in Montfaucon's Antiquities, v. 14.), the Lotus of those countries is unquestionably a Water Lily, of which three kinds are mentioned by M. Desfontaines, and represented on many Egyptian monuments. "Two of them," he says, "have been well described in the works of Herodotus and Theophrastus; one has white flowers and fruit like that of a poppy, full of a great number of seeds: this is the Nymphæa Lotus (*fig.* 757.) of Linnæus. The other, called by Herodotus the Lily Rose of the Nile, and by Theophrastus the Egyptian Bean, or Lotus of Antinoüs, has a flower

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Nymphæa Lotus.

of a lovely red, and a fruit shaped like the rose of a watering-pot, pitted with deep hollows, each containing an oblong seed, as large as a small filbert: this is the Nymphæa Nelumbo of Linnæus, the Cyamus Nelumbo of Sir J. E. Smith, and, according to him, the κυαμος of the ancients, which has been confounded by other able writers with the true Lotus of Egypt, Nymphæa Lotus, and has probably become important in the Egyptian Mythology only as a substitute for the former (the real "Lotus of India"). This fruit, compared by Theophrastus to a wasp's nest, is represented on various Egyptian monuments."

The red-flowered Lotus is common in India, but has disappeared in Egypt; its former existence there being incontestably proved by the testimony of Herodotus and Theophrastus.

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Egyptian Arum.

Lastly, the third species has blue flowers, and a fruit like the first: it is likewise delineated on the monuments of antiquity, and has been noticed by Athenæus. This author says that at Alexandria the crowns worn at the festivals of Antinoüs were composed of the red or the blue Lotus. MM. Delille and Savigny observed the blue Water-lily Lotus, in Egypt, and have described it under the name of Nymphæa cærulea.

The Egyptian Arum (*A. Colocasia* Linn.) (*fig.* 758.) abounds in Egypt, Syria, and the adjacent countries, and is extensively cultivated for the sake of its large esculent roots, which are no less esteemed than those of the allied Arum esculentum *Linn.* in the West Indies. The gourd and cucumber tribe are everywhere planted; no kind, however, being held in such favour as the Cucumis Chata, which, says Hasselquist, grows about Grand Cairo, and nowhere else, and which the grandees and Europeans in the capital eat as the most pleasant fruit they can obtain, and that from which their health is least liable to suffer.

The Carthamus tinctorius (*fig.* 759.), or Safflower, is raised in large quantities throughout the country, and is a source of much profit to the natives. Besides its valuable properties as a dye, at Cairo the young leaves are considered an excellent salad.

The Onion (*Allium Cepa*) is a plant, the use of which may be traced, in Africa, and especially in Egypt, to a period of very high antiquity, so far back as 2000 years before Christ. It still forms a favourite addition to the food of the Egyptians. Hasselquist, in a panegyric on the exquisite flavour of the Egyptian onion, remarks, that it is no wonder the Israelites, after quitting the land of bondage, should have regretted the loss of this delicacy as they did, with the reproachful exclamation, "we remember the fish that we did eat in Egypt, the cucumbers, and the melons, the leeks, and the onions, and the garlic." These roots are mild and pleasant in Egypt, though strong and nauseous in other countries. There they are soft and yielding; but in more northern regions they are hard, and their coats so compact, as to render them difficult of digestion. The Egyptians and Turks eat them roasted and cut into four pieces, with some bits of cooked meat: a preparation which they call kebab, and consider so delicious, that they devoutly wish it may form one of the viands of Paradise. A soup made of Egyptian onions was pronounced by the learned traveller to be certainly one of the best dishes of which he ever partook. The predilection for this savoury bulb extends in Africa beyond the country of the Nile. Major Denham, in his route south from Bornou, observed numerous gardens, in which the only vegetable cultivated was the onion. The ancient Egyptians worshipped the onion, and "shed tears at the scent of a deified leek." By the Greeks, again, this root was held in abhorrence; while the Roman soldiery and labourers almost lived upon it. In the south of Europe, the love of onions was formerly not confined to the lower classes, but extended even to the court; and it is related of Alfonso, king of Castile, who had the greatest aversion to that savoury vegetable, that, in the year 1368, he instituted an order of knighthood, by the laws of which it was enacted that those knights who had eaten garlic or onion should not appear at court, nor have any communication with their brethren, for the space of one month. So great a quantity of onions was cultivated at Albi, in France, that the tithe of them produced to the archbishop an annual revenue of 1000 crowns.

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Carthamus Tinctorius.

The Acacia of the Nile (*A. nilotica*) is supposed to be the species that yields gum-arabic.

From time immemorial the Cerealia have abounded in Egypt; and in the tombs of the Egyptian kings, which were observed by the naturalists of the famous French expedition, vessels were found, filled with wheat, perfect in form and colour, though buried for many thousand years; so that it is not improbable that Egypt may have been the native country of

this grain; and for many years so great was the fertility of Egypt, that it was styled the granary of Europe.

Many are of opinion that we are indebted to Egypt for the Bean (*Vicia Faba*); certain it is that the Greeks received it from that country.

The coast of Barbary is described by Desfontaines, in his Flora Atlantica, as a warm but salubrious and agreeable region. Its mild winters resemble an early spring, when the Peaches, Plums, Nectarines, and Almonds are in blossom, the herbage is green, and the fields are adorned with innumerable flowers. There are Triticum durum, distinguished by its horny, scarcely farinaceous kernel, bearded spike, and solid culm; Barley, used only as food for horses; Indian Corn, Sorghum, Holcus saccharatus, Rice in the inundated grounds; Tobacco (*Nicotiana rustica* and *Tabacum*), a great variety of Olives, beautiful Oranges, Figs, Pomegranates, Almonds, Grapes, Plums, Peaches, Pistachio nuts, Zizyphus Lotus, delicious Melons and Gourds, Crocus vernus, the White Mulberry for feeding silkworms, Cotton, Sugar Cane (in gardens), Hibiscus esculentus, and many European kitchen vegetables. Opposite to Tripoli, in the Lesser Syrtis, is an island, now called Gerba, or Jerba, once inhabited by the Lotophagi, a people so termed because their chief food was a fruit called Lotos. "After the Palm," says the learned Shaw, in his account of the vegetable products of Algiers and Tunis, "we are to describe the Lotus, whose fruit is frequently mentioned in history; the Lotophagi also, a considerable people of these and the adjacent districts, received their name from the eating of it. Herodotus informs us that the fruit was sweet like a date; Pliny, that it was of the bigness of a bean, and of a saffron colour; and Theophrastus, that it grew thick, like the fruit of the myrtle tree. This shrub, which is common in many parts of Barbary, has the leaves, prickles, flower, and fruit of the Zizyphus, or Jujeb; only with this difference, that the fruit here is round, smaller, and more luscious; at the same time, the branches, like those of the Paliurus, are neither so much jointed nor crooked. The fruit is still in great repute, tastes something like gingerbread, and is sold in the markets all over the southern districts of these kingdoms." It appears very certain, according to M. Desfontaines, that this shrub is the true Lotos, whence the Lotophagi derived their name; and this is rendered more evident by a passage from Polybius, who affirms that he saw the Lotos himself. The Lotos of the Lotophagi, says the historian, "is a stiff and thorny shrub; its leaves are small, green, and like those of a Rhamnus. The immature fruits resemble myrtleberries; when ripe, they are of a reddish colour, and equal to round olives in size, containing a stony nut." This description entirely coincides with that of Zizyphus Lotos (*fig.* 760.), and cannot be applied to any other tree of the country. Polybius has further informed us of the mode of preparing the Lotos. When ripe, the fruits are gathered, crushed, and kept in close vessels; the common sort being destined for the slaves, and the best quality for the free men. In this state the fruit is eaten, the flavour resembling figs or dates. A kind of wine is prepared from them by adding water, which is very good, but does not keep above ten days.

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Zizyphus Lotos.

Theophrastus relates that the Lotos was formerly so common on the island now called Zerbi, and the adjoining continent, that the army of Orphellus, when their provisions failed, on the way to Carthage, lived for several days upon it. Now the inhabitants of Syrtis, and the vicinity of the desert, still gather the fruit of this shrub; they sell it in the market for the food of man and beast, and drink the water in which it has been infused. The tradition of its having been formerly the chief food of man is still preserved among them. Homer alludes to this very plant in his Odyssey, when he says that the Lotos had so delicious a flavour, that the strangers who ate it lost all recollection of their own country. Thus were the companions of Ulysses obliged to be removed by force from the place where it grew. Doubtless the lotos fruit was a convenient resource for people who dwelt among uncultivated lands; but nothing but the glowing imagination of a poet could have conferred such exquisite flavour on a fruit which is far inferior to the dates of the same neighbourhood, as to aver that those who had once tasted it, were unwilling ever to leave the favoured land that produced it. Some have considered this Lotos to be the Diospyros Lotos; but without sufficient reason.

It is much to be regretted that the Atlas mountains have not been explored; and yet it would appear, from the geographical notice of the empire of Morocco, published in the Journal of the Royal Geographical Society of London, by Lieutenant Washington, R. N. vol. i. p. 123., that so desirable an object would not be of difficult accomplishment. This gentleman accompanied a mission that was sent by the British Consulate at Tangier, to Morocco, which is situated in a plain that extends east and west, between a low range of schistose hills to the north, and the lofty Atlas to the south, about twenty-five miles wide, and apparently a dead flat to the foot of the mountains, which rise abruptly to the height of 11,000 feet, their peaks covered with snow. This plain, which has no limit as far as the

eye can reach east and west, lying about 1500 feet above the level of the sea, the soil a light sandy loam, with numerous rolled stones of crystallised quartz, agates, flints, porphyry, a green stone, carnelians, &c. &c., is, generally speaking, covered with low brushwood of the thorny plant called Sidra nebach, or Buckthorn; the bank of the streams fringed with Oleanders (*fig.* 761.) in great beauty, while to the north of the city is a forest of Palms and Olives. The river Tensift, springing at about forty miles east of the city, flows at about four miles north of Morocco, and, joined by streamlets from Atlas, reaches the Atlantic near Saffy, about 100 miles distant; the river is shallow, but rapid; the channel about 300 yards wide, but fordable almost everywhere. "The quarter of the city allotted to the British mission was one of the Sultan's gardens, called Sebt el Mahmônia, covering an extent of fifteen acres, planted in the wilderness style, with every variety of fruit tree, Olive, Orange, Pomegranate, Citron, Mulberry, Walnut, Peach, Apple, Pear, Vine, &c.; with Cedar, Poplar, Acacia, Rose, Myrtle, and Jasmine, forming a dense and luxuriant mass of foliage, only broken by the solemn Cypress and more stately Palm; and through which nothing was to be seen but the snowy peaks of Atlas, rising almost immediately above our heads, and the tall tower of the principal mosque, distant about a quarter of a mile. Nought but the playfulness of gazelles, and the abundant trickling of water in every direction to break the stillness of this delightful spot, combining every thing to be desired in a burning clime,—silence, shade, verdure, and fragrance. But, as a contrast to the limited view of our garden, the terraced roof of our house commanded a prospect over the city, the extensive plain, boundless to the east and west, and the whole *dahir* or belt, of the Atlas, girding, as it were, the country from the south-west to the north-east, with a band of snow; and few days passed, during our stay at Morocco, that we did not spend the hours of sunrise and sunset, gazing on this beautiful and striking object, noting its masses and peaks of snow, and deploring that this mighty range, combining within one day's journey, every variety of climate, from the torrid to the frigid zone, and offering such a field to the naturalist, the geologist, and the botanist, should still remain unexplored, and present an impassable barrier to civilisation. Viewed from Morocco, the frozen chain of Atlas bounds the horizon from east to south-west. In January, the transition from the wooded to the snowy zone is immediate; the formation inclines more towards sharp ridges and points than to alpine peaks. The highest of these points visible from the city bears S.S.E., distant twenty-seven miles; two other remarkable masses, forming sugar-loaves, S.E. by E. and S.E., called by the Moors Glaoui. It is singular that neither Moors nor Arabs have any distinguishing name for the Atlas. It is usually called Djibbel Telj, or Snowy Mountains; but the word Atlas is unknown: whence is it derived? May it not be a Greek corruption of the Libyan Adraer, or Athraer, signifying mountain? Many of these heights were measured trigonometrically, and the highest, named by the Moors Mittsin, lat. 31° 12′ N., twenty-seven miles S., twenty miles E. of Morocco, was found to be 11,400 feet above the level of the sea. This is below the limit assigned to perpetual snow by Humboldt; yet but once in twenty years had these summits been seen free from snow." From the enchanting Jebl el Mahmônia, the travellers visited the Atlas mountains, and spent three days among them. At daylight of the 8th of January, (a season of the year when the mountains of more northern latitudes are unapproachable) they bade adieu to their earthly paradise, the garden of El Mahmônia, and journeyed S.E. towards Atlas. The soil of the plain which they traversed was a light sandy loam, covered with rolled stones and shrubs of the Buckthorn, traversed by brooks, fringed with Oleanders, and large Olive groves and ruined aqueducts; at sixteen miles they entered one of the valleys of the Atlas, and, winding up a mountain torrent, encamped for the night at about 2400 feet above the plain, commanding a splendid view of the city and plain of Morocco, with the winding river, losing itself in the western horizon. Next morning, they struck their tents, and set forward by a sharp ascent; a brawling torrent was in the valley beneath them, its banks well wooded with Olive, Carooba, or Al Kharob (*Ceratonia Siliqua*), Walnut, Acacia, Cedar (the finest timber that the country affords, though not very large), and a profusion of Oleanders, and stunted Palms and Rose Trees: they were also cheered and enlivened on the march by the shouts of the Shelluh huntsmen, who, at every angle of the road, endeavoured to rouse game, every turn of the road disclosing fresh beauties in the valley, and a more boundless view of the plain and city of Morocco, its various mosques glittering in the morning sun; the basis of the road limestone; the soil a stiff clay and stony, with boulders of limestone, sandstone, agate, flint, porphyry, gneiss, greenstone, and carnelian; on the brow of the hill a range of limestone, full of vertical fissures, resembling a pile of artificially placed and gigantic tombstones; and several villages near the road, perched in the most romantic situations, and inhabited by the free Shelluhs, the aborigines of these mountains. Till two o'clock in the afternoon they continued ascending, the herbage becoming more scanty and the cedars more stunted, till they reached the

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Oleander.

limit of snow, and proceeded some way above it; when their guides declaring they would proceed no farther, and the thawing snow giving way under their feet, our travellers reluctantly halted, gazing on the highest peaks far beyond their reach, and the intermediate interval presenting one mass of untrodden snow. The barometer indicated an elevation of 6400 feet. Such a country as that round Morocco would indeed afford a glorious harvest to the botanist.

Subject. 3.—*Zoology.*

The Zoology of Egypt presents that scantiness in the number and variety of its objects which might be expected from the nakedness of the country. The French government, always more attentive than others to scientific research, even in the midst of war, commissioned some of the most able zoologists to accompany their army into Egypt; but the paucity of its animal productions prevented the results from being so important as had been expected. The more recent researches of M. Rüppell have made us acquainted with many new animals.

The following quadrupeds appear to be the most peculiar:

Rhinolophus tridens. Trident Bat.	Canis niloticus. Egyptian Fox.	Gerbillus egyptiacus. Egyptian Gerbel.
Nycteris Geoffroyii. Geoffroy's Bat.	Mangusta Ichneumon. Ichneumon.	Lepus egyptiacus. Egyptian Hare
Nyctinomus egyptiacus. Egyptian Bat.	Arvicola niloticus. Egyptian Arvicola.	Felis maniculata *Rup.* The True Cat.
Pteropus egyptiacus. Egyptian Vampire.	Psammomys obesus *Rup.* Alexandrian Sand Rat.	Felis Chaus *Guld.* The Booted Lynx.
Taphozous perforatus. Perforated Bat.	Psammomys cahirinus. Egyptian Rat.	Canis niloticus *Rup.* Nilotic Fox.

Of these animals, the three latter have been recently discovered by M. Rüppell. This naturalist is of opinion that the Felis maniculata is the original stock from which the domestic or house Cat of Europe, in all probability, has sprung; the intermediate gradation being marked by the tame cats of the modern Egyptians. The wild breed is still to be met with in Nubia, and extends, in all probability, to the confines of Egypt. The Felis Chaus somewhat resembles the Booted Lynx of Abyssinia; but is distinct. The Egyptian Fox, C. niloticus, both in habits and appearance much resembles the European Fox; but has a much more slender body, and longer legs: the body also is yellowish, and the throat and belly gray.

The Egyptian Ichneumon (*fig.* 762,), as celebrated and even deified by remote antiquity, deserves a more detailed notice. The important services which this animal renders to mankind certainly gave it higher claims than any other to the homage of the ancient Egyptians. It presents a lively image of a benevolent power perpetually engaged in the service of man, by destroying those noisome and dangerous reptiles which are the pests of hot and humid climates. Of a small size, and without any great physical strength, the Ichneumon carries on a secret and destructive warfare against crocodiles, serpents, and lizards of every description, not, indeed, by attacking these reptiles, frequently so much larger than itself, but by seeking with the greatest perseverance and cunning after their eggs. Urged by this instinct of destruction, it may be seen at the close of day gliding through the ridges and inequalities of the soil, fixing its attention on every thing that strikes its senses, with the view of evading danger or discovering prey; its thirst for destruction, in fact, is so great, that even after its appetite has been satisfied, it destroys every living thing within its reach too feeble to make resistance. It particularly seeks after eggs, of which it is extremely fond, and it thus proves so destructive to the race of crocodiles. It is easy of domestication, and in this state evinces great attachment both to the house and the person of its master. It never wanders from the first, and knows the person of the latter, recognises his voice, and is pleased by his caresses. Its sense of smell, as may be supposed, is particularly acute; and the ears are remarkable for their breadth and the extension of the orifice.

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Egyptian Ichneumon.

The domesticated animals are of much the same breeds as those distributed in the Barbary States. The vicinity of Arabia supplies the Egyptians with the fleetest and most beautiful horses; while the ass is much stronger and more serviceable than the European: this breed attains to the size of ponies, and has long been introduced into Malta, where they command a price equal to fifteen or twenty pounds. The sheep are of the broad-tailed race, spreading, with various modifications, over Barbary and the Levant, from whence it has passed into India, China, and Southern Russia. The Goats (*fig.* 763.) are particularly elegant: the hair is sleek, the forehead arched, and the ears very long and pendulous: this breed was introduced into Malta and Sicily by the British army, on its return from Egypt; and, from personal observation, we think those countries well adapted to promote its increase.

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Egyptian Goat.

The Birds do not materially differ from those of Europe. Vultures and storks are held in deserved esteem, from their usefulness in devouring offal and all dead animals: hence they may be seen on the terraces of houses, building and living in perfect security even in the midst of noisy and p..

pulous cities. The Vulture percnopterus, or slender-billed Vulture, rare in Europe, is here one of the most common birds: it also frequents the deserts, and preys upon those men and animals who have unfortunately perished in those immense wastes. Several Bustards, together with Partridges and Quails, inhabit all the sandy tracts.

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Sacred Ibis.

The sacred Ibis of the ancient Egyptians (*fig.* 764.) was long confounded by naturalists with other birds not even natives of the country. M. Cuvier, however, has now clearly ascertained the species which excited so much veneration from antiquity. Its colour is white, with long disconnected plumes on the wings, of a glossy blackness.

The Scarabæus sacer, or Sacred Beetle of the Egyptians, so often seen represented on their sculptured monuments, is rather larger than our common dung beetle, and is entirely black. Of the fish and other inferior animals, we have nothing of much interest to communicate.

SECT. III.—*Historical Geography.*

There is no kingdom more distinguished in history than Egypt, or the name of which excites more awful and solemn ideas. The dim records of her ancient story are coeval with the origin of social union, and of all the arts which improve and embellish human life. Yet her early dynasties are involved in deep obscurity, and the descriptions of their pomp and grandeur might even have been treated by modern scepticism as fabulous, had not such astonishing monuments remained almost entire to attest their truth. The reign most celebrated by tradition is that of Sesostris, who is represented as having subjugated Asia, even to its central regions; and in fact the sculptured monuments of Thebes are representative of triumphs, not only over the Ethiopians, Jews, and Syrians, but over the natives of Assyria, Persia, and even of Bactriana. Greece has always owned herself indebted to Egypt for her civilisation, which began much later, though it proceeded with more rapid steps, and rose to a much loftier height. At length, in 525 A. C., Psammenitus, the last native king, yielded to the arms of Cambyses, who endeavoured, but with little success, to push his own conquests into Ethiopia and the Oases. Egypt, however, proved a turbulent member of the Persian empire, the authority of which was disputed by Nectanebis and other usurpers. This antipathy to the Persian yoke caused Alexander to be welcomed as a deliverer. That great monarch appears to have highly estimated the importance of Egypt, especially in a commercial view, which his comprehensive mind could fully appreciate. Alexandria, the most celebrated of all the cities founded by him, proved by its subsequent greatness the judgment with which its site had been chosen. The benefits projected by that conqueror were, even after the partition of his empire, in a great measure secured by the dynasty of the Ptolemies, which was established in 430 A. C. Its intelligent princes rendered Egypt the main seat of Grecian learning; and, by promoting every species of public improvement, made her probably more flourishing and enlightened than she had been amid the tyrannic pomp of the Pharaohs. The subjection to Rome, therefore, which was completed in 29 A. C., was a misfortune to Egypt; though industry and civilisation were still protected, and Alexandria continued a great seat of learning, and the second city in the empire. A harder fate awaited her in the seventh century, when she was over-run by the Saracen hordes. The ferocious bigotry of Omar impelled him to exult in the destruction of that library which had been the pride of the Ptolemies, and unrivalled in the ancient world; and it led him to inflict upon Egypt evils still more deeply felt. By degrees, however, the conquerors imbibed the arts and humanity of their new subjects; the Saracens became a polished people; and, under Saladin, the soldans of Egypt held the first place, as to power and splendour, among Mahometan princes. An unfortunate reverse, however, awaited this dynasty. The Mamelukes, a race of slaves whom they had imported from Georgia and Circassia, revolted against their masters, and set up a lawless and turbulent sway, which long crushed in Egypt all the seeds of order and improvement. They were destined, indeed, to bend beneath the dominion of the Turks, after the capture of Constantinople had rendered them masters of the Eastern Empire. In 1516, Selim subdued and put to death the Mameluke soldan, and appointed a pacha in his room. The Mamelukes, however, retained many privileges, particularly that of bearing arms; and, as they formed the bravest cavalry in the empire, they were always the rivals of the Turks, and often their masters. From that time Egypt continued to vacillate between this tumultuary aristocracy and the gloomy despotism of the Porte. The extraordinary and unjustifiable invasion of the French in 1798, had no permanent effects; and gave only an opportunity for British valour to display itself in their expulsion. The new order of things, however, afforded to the Turks an opportunity of establishing their power more firmly than before. The Pacha, Mohammed Ali, succeeded,

certainly by very violent means, in cutting off the principal leaders of the Mamelukes, and expelling the rest from Egypt. That chief has since rendered himself independent of the Porte, and has governed the country with such vigour, and in such a spirit of improvement, as promise in some degree to restore to Egypt the prosperity of her best days. He has even sought to extend his dominion over other parts of the Turkish empire, and is at present master of Candia, and Syria; which the Porte by a recent treaty has been obliged to cede to him.

Sect. IV.—*Political Geography.*

Egypt, since the earliest ages, has been governed despotically. As soon as the Turks obtained possession of it, they claimed the right of ruling it by a pacha, invested with all the prerogatives of the Sultan, and responsible to him. It has, however, as we have already observed, been always a loose and turbulent appendage of the Ottoman empire. This insecurity was occasioned, not only by its distance, and the difficulty of communication, but by the share in the administration still left to its former rulers, the Mamelukes. This share was, in theory, vague and slight, but in practice extensive; since they composed the best cavalry in the empire, and were ever ready to enforce with the sabre their own claims, just or unjust. The undefined limits between their power and that of the Pacha necessarily caused a constant collision. Sometimes the Pacha was expelled by the Mamelukes; and the Porte, when pressed by other concerns, was obliged to connive at the revolt. If the people were ever able to mingle in these contests, it was in a tumultuous manner, which produced no benefit to themselves, and only augmented that reign of disorder, which was so fatal to all improvement and regular industry.

The Mamelukes now belong to history. They appear to have made their final exit from the political scene; and, notwithstanding some brilliant qualities which they possessed, their fate can be no object of regret. Their expulsion left Egypt almost wholly subject to the sway of Mohammed Ali, who had received from the Porte the appointment of pacha, but who, profiting by the distractions of the Ottoman empire, has established a power wholly independent. His administration has hitherto been a blessing to Egypt. He has established a better system of law and order than that unfortunate country had for ages experienced, he encourages every species of industry, and is studying to introduce the arts and improvements of Europe. Actuated by the usual ambition of monarchs, he has attempted conquest, and extended his dominion southward along the Nile as far as Sennaar, and even to Darfour; but tracts so distant and difficult of access can never be held without much difficulty, and are said to have already eluded his sway. In Arabia he has completely crushed the power of the Wahabees, and added to his domain the sacred territory of Mecca and Medina. For some time Mohammed Ali ceased not to own the supremacy of the Porte, and sent to Constantinople a tribute in money and grain. Now, however, he has established his complete independence, and has even threatened the overthrow of the Ottoman power, which was only saved by the interference of Russia.

Besides these supreme authorities, there is a sort of interior political system, existing particularly among the Arabs, who form the chief population of the villages, especially in Upper Egypt. These, with their surrounding territory, are governed each by its sheik, whose office is hereditary. The accession of a new sheik, indeed, must be confirmed by the Pacha, who requires on this occasion to be propitiated by a large sum of money. When, however, these sheiks pay their tribute, and perform the military services demanded, they are little molested in their internal administration. Like the rest of the Arabs, they are divided among each other by deadly feuds, and sometimes carry on private war.

The revenues of Egypt arise from three sources, the lands, the *miri* or poll-tax, and the customs. All the lands are judged to belong to the Grand Signior, and this claim has been made good by Mohammed Ali, who has in a great measure abolished the prescriptive rights which many individuals claimed to them. The poll-tax is levied only upon Christians and Jews, and is not nearly so considerable. It is paid by all males arrived at the age of sixteen, and varies, according to their property or favour, from 2¾ to 11 piastres. The next branch consists of the customs on all goods imported at Alexandria, Damietta, and Suez; and also at Cairo, on their transit to Upper Egypt. Pococke reckoned the land tax at 480,000*l.*, the miri at 64,000*l.*, the customs at 118,000*l.*: in all, 662,000*l.*; of which he understood that only 16,000*l.* along with a tribute in grain and other commodities, was remitted to Constantinople. General Reynier, during the occupation of the French, supposed that the amount might approach 1,000,000*l.* It is understood that the present ruler, by a rigorous levy of the duties, by the improvement of the country, and by the tribute exacted from the conquered territories, has considerably enlarged the sum, which by the most recent writer is estimated at $17,600,000, while the ordinary expenses are not supposed to exceed $16,000,000.

The army, which formerly consisted only of an undisciplined and turbulent though brave militia, has been placed by Mohammed Ali on the most efficient footing. By the aid of French officers, he has disciplined a large body of troops in the European manner, and

rendered them decidedly superior to any force which the East can oppose to them. In 1834, the troops thus trained were reckoned at 74,000. The Pacha has founded at Cairo a military college, in which 1400 boys are educated by numerous European teachers, and in which he expends monthly about 6000 dollars: he has also established there a cannon foundery, and a manufactory of arms and gunpowder. His navy consists of 9 ships of the line, 7 frigates, and 30 smaller vessels.

SECT. V.—*Productive Industry.*

Egypt was distinguished at an early period for the cultivation of the useful as well as of the fine arts. Agriculture, the primary art, for which her situation and soil peculiarly fitted her, appears to have been carried to great perfection, at a time when the finest of the bordering countries were under common and pasturage. Those earliest authentic records of the human race, contained in the sacred writings, represent Egypt as greatly resorted to, in times of scarcity, for a supply of grain. When high cultivation has once been established in a country, it is scarcely eradicated, even by long periods of anarchy and misgovernment. After all the calamitous revolutions through which Egypt has passed, and notwithstanding her deep political degradation, her fertile lands continue to be cultivated with skill and care, and to yield copious harvests.

In all hot countries, but more especially in Egypt, irrigation is the first recourse of agriculture. The periodical inundation of the Nile, when swelled by the rains of Abyssinia and central Africa, is the primary cause on which her fertility depends. This is so fully admitted, that, in the years when the Nile does not rise beyond a certain height, the miri, or tribute, is not exacted. The whole of the Delta, during the autumnal season, is laid entirely under water. To effect this object, a number of intersecting canals were formed by the provident care of the ancient government; and the utility of these is so urgent, and the consequences of their interruption so immediately fatal, that they have not been wholly neglected, even by the supineness of modern administration. The number of canals in Egypt has been stated at 6000; but this, at all events a loose estimate, cannot be true, unless we include those minor channels conducted by private industry through every tract, and almost every field. The great canals, which are maintained by the public, do not exceed eighty or ninety. In a great part of Upper Egypt and of Fayoum, machinery is employed to convey the water to grounds which, from their elevation above the river, cannot, without artificial means, be inundated. Buckets raised by pulleys are sometimes sufficient; but at other times recourse is had to more operose and ingenious machines moved by oxen (*fig.* 765.). This successive rise and retiring of the waters produces a singular variation in the aspect and surface of Egypt. According to the description of Amrou, in his report to the Caliph Omar, it presents in succession an appearance of a field of dust, that of a fresh-water sea, and that of a flower-garden.

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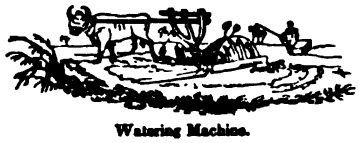

Watering Machine.

Few countries unite in a greater degree than Egypt the products of various and opposite climates. On the borders of the tropical and temperate zones, it yields, in almost equal abundance, the vegetable productions proper to each; while the variation from overflowing moisture to extreme dryness greatly extends the range of cultivation. Rice, which was introduced by the Saracens, has been found peculiarly adapted to those lower lands which at one season are thoroughly submerged by the Nile. On these it is sown in June, grows amid the water, and yields a harvest in October. Wheat and barley grow better in the higher grounds, and particularly on the well-watered districts of Upper Egypt. Those tracts which obtain but scanty irrigation by artificial means are only fit for the coarser product of the Holcus d'hourra, the grain generally consumed in Nubia, which combines the qualities of a shrub with that of bread corn. Its stalk contains a juice which the natives suck, and when it is dried, it serves the purpose of fuel; above grow leaves, which afford food for the cattle. Oats are not an Egyptian product; but beans are raised for the use of the camels. Maize, flax, and sugar are also objects of some culture; and, in a smaller degree, indigo. Cotton, which, till lately, was scarcely ranked as a product, has, through the exertions of Mohammed Ali, become an article of the greatest importance, supplying the home manufactures, and affording the materials of a large export. Since 1822, a continually increasing quantity has been imported into Britain; in 1832, this amounted to 10,000,000 lbs. It bears a higher price than any other except that very finest American species called "Sea Islands." The whole produce is estimated at from 20 to 25 million pounds. The soil requires little labour, besides that of irrigation. Being softened to a species of thick mud, it receives the grain without further preparation; and even where dry, its quality is so loose and sandy that it may be worked with very little trouble.

Egypt, in its fertile tracts, exhibits a blooming and verdant aspect; yet it is not, on the whole, a wooded country. The foliage which embellishes it, is derived chiefly from fruit

and garden trees. The palm, the sycamore, the tamarisk, and some species of acacia, are the most prevalent. For timber and firewood it is almost entirely dependent upon Syria. Some Egyptian wines were celebrated in antiquity, though the country seems by no means well adapted for this product; at present the vine is cultivated chiefly for its grapes. Fruit is generally abundant, but apt to be watery. The apricot, the citron, the lemon, are reckoned the best.

Domestic animals are not numerous in Egypt. Cultivation is performed by the aid of cows and oxen of a large breed, and also a species of tame buffalo, which is sometimes excited to fury by the strange vesture of Europeans. A small number of cattle suffice for the easily cultivated soil; and, as Egypt is nearly destitute of natural grass, they are fed upon clover. The great have very fine horses, imported chiefly from Barbary; though, since the expulsion of the Mamelukes, who took especial pride in these animals, their numbers must have diminished. Their paces are only suited for military manœuvres: they can do nothing but walk or gallop. In Egypt, as in Syria, the animal used for travel is the ass, of which there is a breed very superior to any seen in our climates. As the Orientals ride much, asses are very numerous; there are said to be in Cairo 40,000. Camels are seen in great numbers; but they are rather for journeying over the vast surrounding deserts, than for the interior of the country. Large swarms of bees are bred in Upper Egypt; while Lower Egypt is remarkable for a process of hatching fowls by artificial heat, of which, however, it is difficult to perceive the advantage, and which does not produce such sound or healthy chickens as the natural process. The bordering deserts contain the lion, the hyena, the antelope, and other wild animals generally found throughout Africa; and in Upper Egypt a considerable number of crocodiles and hippopotami are found in the Nile.

Egypt is not, and never was, a great manufacturing country. With the produce of her soil she purchases the fabrics of neighbouring nations, particularly at Constantinople; and, generally speaking, every thing which is imported thence is better and more valued than what is made in the country. There are, however, extensive manufactures of linen, though not of that fine linen for which Egypt was anciently famous. Muslin and cotton dresses are now preferred, as more suited to the climate. The linen at present manufactured consists chiefly of the coarser kind, for sheets, curtains, towels, and sackcloth. The large towns of Lower Egypt, particularly Damietta and Mehallet, are the main seats of this manufacture, which is also carried on at Cairo, Fayoum, and Siout in Upper Egypt. These are produced, not merely for internal consumption, but large quantities are exported to different parts of Turkey and the Mediterranean. The Pacha has introduced the cotton manufacture, which he successfully carries on by European machinery, and even the steam engine. There are also manufactures of carpets for sofas at Benisuef, and of embroidered silk handkerchiefs at Cairo; but none of the articles there produced equal those brought from India or Asia Minor. The potteries of Egypt are extensive, the mud or slime deposited by the Nile being well fitted for this purpose. From it the Egyptians fabricate a species of porous jars, which are highly prized for the property ascribed to them of cooling and clarifying the water; every thing which tends to improve that simple beverage being held in these climates especially valuable. These jars appear to have been used from the earliest ages, representations of them being found on the most ancient monuments.

Egypt is more favourably situated for foreign commerce than most other countries, as it may be said to form the connecting link between Africa, Europe, and Asia. It is only, however, at particular periods that its government has afforded the necessary encouragement and protection. The Pharaohs, like the other Oriental despots, were averse to navigation and foreign intercourse of every description. The Persian policy was similar. The sovereigns of the Greek dynasty were the first who turned their attention to the means of improving the vast natural capacities of Egypt. Alexander, in founding the city to which he gave his name, had evidently formed the design of making it a grand commercial emporium, which it soon became. Under the Roman empire the supply of the capital of the world, and its rich dependencies, with the commodities of central and eastern Africa, and still more of India, occasioned an immense traffic; but on this the conquest of the Saracens inflicted a blow from which the country never recovered. The Venetians and Genoese, indeed, who first revived commercial enterprise in Europe, formed factories in Egypt, which they made the entrepôt for Indian goods. But the natives had no share in these transactions; and, after the discovery of the passage by the Cape of Good Hope, the land carriage, the difficult navigation of the Red Sea, the exactions and persecutions to which Europeans were exposed, rendered it no longer possible to compete with those who conducted the traffic even by that circuitous route. Egypt, however, possesses natural advantages, which, under an improving and protecting administration, might again enable it to engross a large share of the communication between Europe and India. Some efforts, though yet in their infancy, are understood to be actually making by the Pacha to renew this intercourse. As yet its maritime trade is nearly confined to the Mediterranean. From Damietta it exports, to Syria, Asia Minor, and Turkey in Europe, large quantities of grain, in which shape the tribute was sent to Constantinople; also coarse linens in considerable quantity. The commerce with what

are called the Frank nations is carried on entirely from Alexandria, and by European merchants resident there; but in the course of the last two centuries it greatly declined, though it has been much augmented by its present ruler. He commits, however, the great error of interfering in every branch, and even becoming himself a partner, demanding often unreasonable advantages. The internal trade is entirely carried on by the Nile and its branches, natural and artificial, which penetrate to all the great cities and cultivated tracts of Egypt. The communication of Alexandria with the interior was, in earlier times, usually maintained by a canal reaching direct from that city to Foua. After the negligence of its modern rulers had allowed that communication to be choked up, the European goods landed at Alexandria were conveyed in boats to Rosetta, and up that western branch of the Nile. The present Pacha, however, has restored this canal, forming a channel forty-eight miles long, ninety feet wide, and about eighteen feet deep. This important work was executed in 1819, in the course of little more than six weeks, by the labours of 250,000 men, who were violently impressed for that purpose.

The most active branch of Egyptian commerce, and that which has remained unaffected by political vicissitudes, is carried on by caravans with the interior of Africa. The journeys on every side must be made through immense tracts of desert, where they could penetrate only by the aid of the camel. The caravans which go westward from Cairo do not penetrate beyond Fezzan, at which emporium they obtain, imported by the merchants of that country itself, the varied produce of Soudan. This caravan goes annually, unless prevented by peculiar circumstances, and performs its journey in fifty days. Those which proceed southwards depart chiefly from Siout; and their destination is Darfour and Sennaar. The caravans to the former country are the most numerous and frequent, though still inferior to the Fezzan caravan. Their departures are very irregular: sometimes there are two in the year; at other times, two or three years pass without one. A caravan is reckoned large, if it number 2000 camels; some amount to no more than 500, or even 200. The imports from all these quarters are much the same. Gold, ivory, senna, ostrich feathers, gum, are secondary objects; but the main staple is always slaves. Egypt supplies with this unlawful commodity not only its own harems, but those of Turkey, Persia, and all the East. These slaves, being employed chiefly in a domestic capacity, are not doomed to the same severe and oppressive labour as those transported to the West Indies, and, though the services in which they are employed are often of a nature peculiarly degrading, yet, being brought near the persons of the great, they are often raised to favour, and even to power.

The pilgrimages to Mecca and Medina, from the Mahometan states of the West, form another branch, or at least an auxiliary, of commerce. Those from the interior, indeed, go by Nubia, and cross the Red Sea at Suakim; but from Barbary, and particularly Morocco, the most populous and zealous Mahometan countries, the direct route is by Cairo and the isthmus of Suez. In all the countries where pilgrimages are customary, it seems the system that they shall be so far turned to profit, as to pay their own expenses. Traffic becomes, thus, a joint object with religion, and is carried on probably for more moderate gains than if its dangers and hardships were undertaken solely for the benefits accruing from itself. The hostile occupation of the holy cities of Mecca and Medina, by the Wahabees, interrupted for some time this intercourse, which has been re-opened, however, since the occupation of that territory by the viceroy of Egypt.

SECT. VI.—*Civil and Social State.*

The estimates of the population of Egypt have been extremely various; nor are we aware that it has ever been the subject of any accurate census; but the most careful recent estimates seem to fix it at about 2,500,000. The most detailed one, which seems to have been made with diligence, makes, of Copts, 160,000; Arab Fellahs, 2,250,000; Bedouin Arabs, 150,000; Arabian Greeks, 25,000; Jews, 20,000; Syrians, 20,000; Armenians, 10,000; Turks and Albanians, 20,000; Franks, or European Christians, 4000; Mamelukes, 500; Ethiopians, 7500.

Egypt has long been occupied by races of various origin, who have retained their distinguishing characteristics with the constancy peculiar to Oriental nations. The Mameluke, making his boast of being a purchased slave, lived for centuries by the side of the Arab, proud of his freedom and ancient family. The Mamelukes, however, are now expelled; and the leading races consist of the Copts, the Arabs, and the Turks.

The Copts, though not supposed to exceed 160,000 individuals, and of no political importance, are by much the most ancient, and, strictly speaking, the only native race. The sculptures on the most ancient monuments represent under the same form and features the original Egyptians, when that country was ruled by its native kings. The word Copt seems even a corruption of the middle syllable of the word Egyptian. Some authors, and Volney among the rest, have represented their features to be substantially the same with those of the negro; but this seems refuted by the observation of Brown, and the minute anatomical examination of Baron Larrey. The latter considers them as exhibiting, with a few variations, the characteristic features of the Nubian and Abyssinian—their skin of a dusky

yellow; their countenance, full without being puffed; their eyes fine, limpid, opening in the form of an almond, and with a languishing look; the nose almost straight, rounded at the tip; the nostrils dilated; the mouth middle-sized; the lips thick, but less so than those of the negroes, and not, like theirs, thrown back; the beard and hair black and bushy, but not woolly. (Description Historique, Etat Moderne, ii. 3.) In their character, they too much resemble those who, being treated with scorn by others, can with difficulty learn to respect themselves. As usual with degraded races in barbarous countries, they are employed in those branches of trade and accounts which are repugnant to the turbulent pride of the ruling people. For want of others who possess the requisite capacity or application, their oppressors are under the necessity of employing them as stewards, superintendents, collectors of the revenue, keepers of registers, &c.: and various branches of trade are in their hands. They cannot, however, be expected to exercise these functions in the same honourable and respectable manner as if the employments, and those who practised them, were the objects of public esteem. The Copts are represented as crafty, covetous, cringing, and addicted to mean sensual indulgences. They are, however, a peaceable race, and are said to be remarkable for the warmth of their domestic attachments. Though they are found in every part of the country, their chief seat is in Upper Egypt, where whole towns are peopled by them.

The most numerous part of the population, being that almost exclusively employed in agriculture, consists of Arabs, whom the fertile soil of Egypt has attracted from all the surrounding regions of desert. Lower Egypt has been peopled chiefly from Arabia and the shores of the Red Sea; Upper Egypt from the tracts of Africa which lie to the west and south. These cultivating Arabs, called Fellahs, retain much both of the features and character of their original tribes; an oval countenance, dark skin, large forehead, and small sparkling eyes. Neither have they, by any means, lost that pride, attachment to kindred and ancestry, and vindictive spirit, which distinguish the independent sheiks of the desert. On the whole, however, their conduct is much more settled and peaceable; indeed, in the large towns of the Delta, they have contracted dissolute and irregular habits, which seem to have prevailed from antiquity in that part of Egypt.

The Mamelukes can claim little notice here, since the vigorous though cruel policy of Mohammed Ali has finally rooted them out of Egypt, and scarcely allowed them to find refuge in the remotest depths of the African continent. This extraordinary race, without kindred, without progeny, consisting of slaves imported from a remote country, and raised by the ill-earned favour of their masters to the most distinguished posts, formed the most prominent part of the Egyptian population. Their bravery, their splendour, their incessant conflicts with each other and with the Turks, gave to Egypt a stirring and picturesque aspect, which no other part of the Ottoman empire exhibited. This sort of interest, however, very poorly compensated for the license and disorder with which they continually afflicted the country, and for the interruption which they occasioned to all regular industry. Their extinction, therefore, may well be considered as a fortunate circumstance, and an omen of better times.

The Turks, though the least numerous part of the population, are highly important, as having been always nominally, and as being now really, the masters of the country. In their general features they do not differ from those who inherit the rest of the empire. This small portion, however, the instruments of a despotic government, and who all either possess or aim at political power, do not afford a favourable specimen of the Turkish character. Among no description of men, perhaps, exists a more entire disregard of principle, than among the officers of a despotic government, who, in seeking to rise, are accustomed to resort to every means of violence or fraud. Spending most of their time in a gloomy retirement, they brood in silence over their dark machinations, and are continually revolving schemes for circumventing and destroying each other. The present Pacha has not much to boast in regard to the means by which he attained his actual supremacy; though he has certainly used it in a great degree for the benefit of those placed under his government. The troops by which Egypt is held in subjection have consisted chiefly of the turbulent race of Arnauts, or Albanians; but the Pacha has recently recruited his armies from all classes, particularly the Arabs, and even the negroes brought from the interior.

There are Jews, Greeks, and Armenians in Egypt, but scarcely in sufficient number to be considered otherwise than as strangers settled in the country. The Jews are, in a great measure, supplanted by the Copts, a similarly oppressed race, in all those branches of traffic which usually devolve upon them in Mahometan countries.

The religion of Egypt is the Mahometan, exercised with all its accustomed bigotry and intolerance. The Copts, who profess Christianity, are subjected to a special tribute or poll-tax, and are excluded from all public employments, except those in which their exclusive qualifications render it absolutely necessary to employ them. They belong to the Eutychian sect, or that of the Jacobites, who differ in several respects from those professing the Greek religion, whom they regard with peculiar antipathy. The patriarch of Alexandria is considered as the head of this sect, the religion of which is also that of Abyssinia. The Copts

have a considerable number of convents, particularly in Upper Egypt and the desert of the lakes of natron. Celibacy, however, is not absolutely required of the inmates. Pococke seems to have rated very low their practical religion, alleging that it consists merely in reciting their long services, without the least appearance of understanding or devotion, and in the strict observance of their frequent fasts. The Jewish rite of circumcision is retained.

The only language peculiar to Egypt is the Coptic. Unlike the Oriental tongues, which appear little more than dialects of one original language, the Coptic has only faint analogies with any other. Its basis appears to be that of the ancient Egyptians, who in every respect were much insulated from the surrounding nations. It ceased to be spoken in the middle of the seventeenth century, and was supplanted by the Arabic, but it is still used in the liturgy and sacred books of the Coptic church. The Coptic differs from the ancient Egyptian only by the great admixture of Greek and Arabic, with some Latin, introduced during the successive domination of the Greeks, the Romans, and the Arabs.

Science and literature throughout Egypt were lately at the lowest ebb. In their loftiest flights the Egyptians made no higher attainments than those of reading, writing, and casting accounts. Even these humble elements were disdained by the ruling powers, and only taught to a few of their domestic slaves, in order to fit them for transacting certain branches of business. Some improvisatory reciters of tales and verse, and some practitioners in astrology, formed the only members of the society who employed themselves in any thing that partook of intellectual exertion. Of late the Pacha has made great efforts to introduce European knowledge, particularly in the mechanical arts; printing-presses have been established under his direction, and even a newspaper has begun to be published.

Oriental manners, by the gloomy seclusion which is inherent in them, greatly circumscribe what are called public amusements. The coffee-houses are much resorted to by the middling classes, who there spend their time in listless indolence, beguile it by occasional conversation, or by listening to the story-tellers, with which Arabia supplies all the countries on which it borders. The baths (*fig.* 766.) are places of habitual resort, both for health and pleasure, and the ablution, being accompanied with skilful and gentle friction, has been described as producing the most voluptuous sensations. The women here chiefly mingle in society with each other, and sometimes, as is alleged, find opportunities for intrigue. In the large towns, particularly of Lower Egypt, the *almés*, or dancing-girls, attract numerous audiences by their exhibitions; the grace and skill of which are variously reported, but they are universally said to manifest a total disregard of decorum. The great seldom appear in public, unless on occasions of public procession; and their leisure is spent chiefly in the indolent seclusion of the harem.

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Egyptian Bath.

The Egyptians are not much encumbered with dress. The most common and seemingly the most ancient article of apparel, consists of a linen or cotton shirt with wide sleeves, over which is a brown woollen cloak or coat. The rich throw over all a fine white vestment, of the form of a surplice, which, being worn on solemn occasions, is supposed to have served as a pattern for the upper vestment of the Christian priesthood. Among the ancient Egyptians, linen was the only material used for stately and sacred apparel; but cotton now, to a great extent, supplies its place. Some of the poorer classes wear nothing but a blanket or wrapper of wool or cotton cloth. The dress of the women is nearly similar; but much of it is made of silk, and they cover the greater part of the face with a gauze veil. The usual head-dress is the turban, confined, however, to the higher ranks, and not allowed to be worn by the inferior classes, who merely cover their heads with the red woollen caps common all over Barbary.

The Egyptians of every class are temperate in respect to food, and even the richest take no pride, nor perhaps much delight, in the luxury of the table. Their dishes consist of pillau, soups, stews, made particularly of onions, cucumbers, and other cold vegetables, mixed with meat cut in small pieces. The Barbary cuscosoo, which is a dish of this description, is not unfrequent. On great occasions, however, a whole sheep is placed in the middle of the festive board. The poorer classes content themselves with dipping their bread in oil or sour milk. The fasts in general are rigidly observed, and, during several of the hottest months, even the rich restrict themselves almost entirely to vegetable food. The use of opium, so general in Turkey, is superseded in a great measure by that of wine, in which the people in this country, even the Turks, indulge with much less scruple than those of other parts of the empire. The lower ranks make a preparation from the buds of

hemp, which produces effects nearly similar to those of opium. They prepare also from barley a species of beer called *bouza*, to which, as an ancient Egyptian liquor, an allusion of Herodotus seems to apply.

Sect. VII.—*Local Geography.*

The only division of Egypt which can be considered as permanent or important is that made by nature into three great portions:—1. Bahireh, or Lower Egypt, composed of the Delta, or territory on the coast, and including the great sea-ports of Alexandria, Rosetta, and Damietta. 2. Vostani, or Middle Egypt; where the Nile, though no longer spreading into branches, flows through a broad and fertile valley. In this quarter are situated Cairo the capital, the Pyramids, and Fayoum. 3. The Said, called partly also the Thebaid, or Upper Egypt, where the Nile, bordered by hills, flows through a narrow valley, containing not any great cities, but the most remarkable of the ancient edifices and monuments.

Subsect. 1.—*The Delta, or Lower Egypt.*

We shall begin our survey with Alexandria (*fig.* 767.), once the splendid capital of Egypt, and one of the most celebrated cities of the ancient world. Even now it forms the link by which Egypt is united with the states of Europe. Its founder, the celebrated conqueror whose name it bears, chose this site as the most favourable for commerce; and it became the emporium of the most splendid and important of the then existing branches, that with India. The merchandise being brought up the Red Sea to Berenice, thence transported across the desert, was carried down the Nile to Alexandria, and thence distributed throughout the West. Alexandria, when it became the splendid and polished capital of the Ptolemies, almost superseded Athens as a literary metropolis. Even when subjected to the yoke of Rome, it was still the second city in the empire, and a grand centre of religious and political faction. It received a mortal blow from the invasion of the Saracens, who not only crushed the general civilization of Egypt, but showed an early preference for Cairo, which connected them with Syria, Arabia, and their other Eastern kingdoms. Alexandria, however, still continued to flourish, so long as it was the channel of the Indian trade; but when this took the direction of the Cape of Good Hope, it sunk altogether, and exists now only as the medium of that limited intercourse, carried on between Egypt and the Frank or Christian states. Its population, once estimated at 300,000, is dwindled so low, that some do not suppose the amount of inhabitants to exceed 5000. This, however, was doubtless too low, even before the late improvements of the Pacha, who has re-opened its water communication with the Nile, and established an arsenal, in which 1600 carpenters, and other artisans, are said to be employed. The present number is supposed not to fall short of 30,000. Notwithstanding this limited population, it presents a sort of epitome of the East. Its traffic draws to it, as to a common centre, the different classes, not only in Egypt, but in Syria, and all the Levant; who all retain their own costume and habits of life, without the least mixture or accommodation either to each other, or to the Europeans with whom they here meet.

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Alexandria.

The approach to Alexandria from the west is attended with some danger, on account of the flat and uniform character of the coast, which affords no objects to guide the mariner. The first landmark is formed by two turreted eminences called Abousir, or the tower of the Arabs. On a nearer approach, Pompey's pillar affords a more precise mark. There are no longer any traces of the celebrated Pharos, and even its site is doubtful. Two harbours are found, the old and the new; the former is commodious, though of somewhat difficult entrance; it was formerly exclusively reserved for the followers of the prophet; and Europeans were obliged to content themselves with the new harbour, which has a rocky bottom, and affords very imperfect shelter, but this restriction no longer exists. The new Alexandria is built entirely outside the walls of the old city, to which it forms only a suburb. The traveller finds here nothing correspondent to those magnificent ideas which history had led him to form. Its aspect is mean, gloomy, and dirty; and it presents no striking or ornamental edifice. A number of granite pillars have, indeed, been brought thither from the ancient Alexandria; but they are only employed to adorn the interior courts of the principal houses. Immediately on quitting these modern precincts, however, all the grandeur of ancient Alexandria bursts upon the view. A vast plain is seen covered with its ruins; broken walls, fronts crumbled down, roofs fallen, battlements decayed, ancient columns, and modern tombs. These objects are intermingled with palm trees and nopals; while owls,

bats, and jackals, are the only living creatures to be met with. The remains may still be traced of those immense reservoirs which supplied the city with water, both for drinking and for gardens. The whole ground on which Alexandria stood was excavated to form them, and the waters of the Nile were at a particular season solemnly admitted into them. Only twelve now remain, which are sufficient for modern supply. From the extremity of the old city extends for upwards of a mile along the coast a range of tombs cut in the rock, each of which appears to have contained three bodies. These monuments, however, to which has been applied the name of Necropolis, or City of the Dead, have been almost entirely stripped of their contents, probably by the Arabs, inspired with the hope of finding treasure.

Amid the general ruin which ancient Alexandria presents, three objects, remaining still entire, arrest the attention. The most celebrated is Pompey's pillar (*fig.* 768.). It seems clear that this title is modern, and that it was probably erected under one of the emperors; perhaps Diocletian. The general impression of its loftiness seems in a great measure owing to its insulated position on a level plain. Pococke does not reckon the height at more than 117 feet; and more modern estimates reduce it to 94 or 95. The pedestal, the shaft, and the capital consist each of a mass of the finest granite. Some travellers have described it as the finest column in the world as to workmanship; but Denon rates it much lower in this respect; conceiving that the only beauty is in the shaft, and that neither the pedestal nor the capital have any peculiar merit. The other objects worthy of particular notice are the two obelisks, fancifully called Cleopatra's Needles, of which one only (*fig.* 768.) is standing. They consist each of a single block of granite, about fifty-eight feet high, and are entirely covered with hieroglyphics, whence it has been inferred that they could not originally belong to a Greek city, but were brought down from some of the ancient capitals of Upper Egypt.

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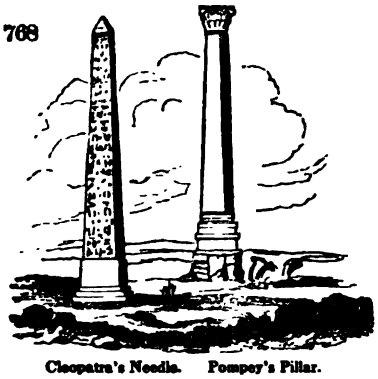

Cleopatra's Needle. Pompey's Pillar.

Alexandria is situated upon a long narrow ridge of land, separating the large lake Mareotis from the Mediterranean. This lake, of a very irregular figure, is upwards of fifty miles in length, and about twenty in its extreme breadth; but its western part, running parallel to the sea, is not above three or four miles broad. It was nearly dry when the English, in the campaign of 1801, admitted the sea into it, with the view of cutting off the French army from Cairo. It is still very shallow, and is passed in many places by fords, or upon causeways constructed by the Arabs. This lake, on the west and south, is surrounded by extensive deserts, abandoned to the Arabs, which insulate Alexandria from the inhabited part of Egypt. It was otherwise in ancient times. This tract formed then the *Mareotic nome*, within the precincts of which a considerable number of towns are enumerated by Ptolemy. Under the Roman empire, it was peculiarly crowded with convents, the inmates of which sought this as a retired situation, and as affording refuge from the persecutions of the Arians and other sectaries. The Emperor Valens, when he compelled the monks of Egypt to military service, is said to have levied in this district no less than 5000 recruits. Gratien Lepère, in making a survey round the lake, found the territory everywhere covered with verdure and shrubs, and capable of culture. (Description de l'Egypte Moderne, ii. 10—20.) He found also the remains of cities, bearing indications of former importance. Among these were two, at a little distance from each other, on the neck of land between the lake and the sea. They appear to be those to which the ancients gave the common name of Taposiris, and are situated near that well-built column, called Koum Abousir, or Tower of the Arabs, which serves still as a beacon. They found also a large ornamented building, about 260 feet square, the destination of which seemed uncertain. In the valleys at the western extremity of the lake appeared the remains of four towns, distant a very few miles from each other. On the southern shore of the lake, near a spot called Abou-el-Kheyr, a double wall, large and well-built moles, and an extensive surface covered with fragments and rubbish, mark the site of an important commercial city, which was doubtless the ancient Marea. Nothing but culture, and the restoration of some of the old canals, seems wanting to restore fertility and population to this district. The great obstacle would arise from the Arabs, large bodies of whom are now in full possession of it, and whose habits of restless and desultory warfare would render it very difficult either to drive them back, or to fix them as cultivators.

The province of Bahîreh, the most western of the Delta, is traversed by the canal of Alexandria, which separates from the Nile, near Rahmanieh, a town of some magnitude, surrounded by a wall, and which the French, in 1801, converted into a fortified post, but

were obliged to surrender it to the British army under General Hutchinson. This district is less watered than other parts of the Delta; and its chief product is cotton; the market for which gives some importance to Damanhour, situated in the heart of the province. In ascending the Nile, the canals derived from it cease, and cultivation is nearly confined to its immediate banks. Teraneh, affording the nearest point of water communication to the lakes of natron, exports from 3500 to 4000 tons of that article, chiefly to Marseilles. Wardan is the most southerly port, whence vessels may reach Cairo in twenty-four hours.

From Alexandria, the ridge of land between Mareotis and the sea extends eastward, and is prolonged by the lake Maadie, or Aboukir, till it reaches the castle of Aboukir, on the other side of which is the bay of that name. This line of coast, and this bay, are rendered illustrious by glorious events in British history; the victories of Nelson and Abercromby. Near the termination of Lake Maadie commences that of Edko, about fifteen miles long, communicating with the sea at its western point, but afterwards separated from it by a long line of barren coast composed of shifting sands. The path through them is pointed out to the traveller by columns at regular distances of half a mile, within each of which is placed, for his refreshment, a vase of water. After accomplishing this dreary journey, he arrives at Rosetta.

Rosetta is situated at the mouth of the most westerly of the two branches of the Nile, which enclose the province of Garbieh, the only portion of Egypt which is now strictly Deltaic. While the canal of Alexandria ceased to be navigable, Rosetta became the only medium of communication for that city with Cairo and Upper Egypt; the goods landed at Alexandria being conveyed thither in boats. The town itself, being situated on the western bank, is surrounded by barren sand hills, which here form the boundary of the sea; but it enjoys on the other side the view of the blooming groves and rich gardens of the Delta. Rosetta is better built than Alexandria; the materials are of brick; and though the streets are, as usual in Egypt, narrow and gloomy, it has, on the whole, when compared with other Oriental towns, a neat and pleasing appearance. A considerable manufacture of striped and coarse linens is carried on; but its wealth and population (supposed about 15,000) are rather on the decline. Even the recent improvements, including the restoration of the canal of Alexandria, have rather tended to remove the commerce which formerly centred in it.

In ascending the Rosetta branch, we come first to Metoubis, a large town, noted for the dissolute character of its inhabitants. Farther up is Foua, once distinguished as the entrepôt between Alexandria and Cairo. In consequence of the neglected state of the canals, it has been supplanted by Rosetta in this trade; and having greatly declined in consequence, only a small part of its wide circuit is now inhabited. The canal of Hashabi, derived from the head of the Damietta branch, and ending at the lake Bourlos, runs nearly parallel to that branch at the distance of five or six miles, and communicates with it by several channels. On this branch, at a village, still called Sa el Hadjar, are the ruins of the ancient Sais, once the residence of the Pharaohs, and the original seat of the colony by which Athens was said to have been founded. An enclosure of more than half a mile square, covered with rubbish and fragments of every description, still attests its ancient grandeur.

Farther to the south, about ten miles east from this branch of the Nile, is Tanta, considered the most populous town of the Delta, though it does not contain above 10,000 inhabitants. It is chiefly supported by the pilgrims frequenting the tomb of Seid Ahmed el Bedaouy, who died in the thirteenth century, in such an odour of sanctity as rendered his shrine one of the most sacred in the estimation of Oriental devotees. There, at a particular season, an assemblage takes place, from Egypt, Barbary, Abyssinia, and even from Darfour, of not less than 150,000 persons. According to the Eastern custom, trade is combined with superstition; and, when the acts of devotion terminate, a most extensive fair succeeds. A tumultuous and often disorderly festival closes the scene. The mosque, built by the Sultan Melik el Nasser, in honour of the saint, is one of the most splendid edifices of modern Egypt. This city is observed to be nearly at an equal distance from Cairo, Damietta, and Rosetta,

The upper extremity of the Delta, consisting of the angular space formed by the junction of the two branches, is called Menoufieh, and forms one of the most agreeable and fertile portions of Egypt. It is traversed by a broad canal from one branch to the other; and though at each inundation it is completely overflowed, the waters do not remain so long, or prove so injurious to health, as in the lower districts. Menouf, the capital, is a town of some importance.

In descending the branch of Damietta, we find it, like that of Rosetta, accompanied by a parallel canal, called, in its early course, that of Karinein, and afterwards that of Melyg. At this last village, it throws a branch across the Delta, and finally loses itself in the lake Bourlos. It appears to be the ancient Sebennytic branch, and, in fact, presents no appearance of having been formed by art. The shores of the Nile are still more fertile and beautiful here than on the opposite branch; and at the distance of every two or three miles occurs a large town or village, embosomed in palm trees. Among these may be noticed Benal-

hassar, to the north of which appear traces of a large ancient city, enclosed between two circular mounds, defending it against the inundation of the Nile; the site, as Pococke supposes, of the ancient Bubastis. The next place of importance is Abousir, a well-built town, where considerable remains give some support to the opinion of D'Anville, who pronounces it to be the site of Busiris, anciently celebrated for a magnificent festival held in honour of Isis. About five miles below is Semenhoud, a very flourishing town, carrying on an extensive trade, for which its situation upon the Nile, and connection by several channels with the canal of Karinein, and with Mehallet, is very favourable. It appears to contain 4000 or 5000 inhabitants. It is usually considered as the ancient Sebennytus; on which, indeed, Pococke observes, that the latter might be on the Sebennytic branch, but Boys-Aymé remarks, that the adjacent ruins actually extend westward as far as the canal of Karinein. On that canal, about four miles to the west of Semenhoud, is Mehallet, considered the capital of the Delta, and the most industrious and manufacturing town in all Egypt. The chief fabrics are those of silk, and particularly a sort of linen handkerchiefs with silk borders, used in the baths, with which this city supplies the whole country. The manners, however, appear to be very licentious; disorderly females are particularly numerous, and are allowed a degree of liberty which is denied them in other Egyptian cities. Farther to the north, on the same canal, are the ruins of Bahbeys, the most splendid in the Delta. In the centre of an enclosure of brick, about 1200 feet by 800, are the remains of a grand edifice, 160 feet by 100. It consists of a confused mass of granite, among which are distinguished trunks of columns, and the remains of capitals with the head of Isis, all covered with sculptures in bas-relief most carefully executed. These fragments consist of the finest red granite brought from the quarries of Syene. Farther down on the Nile is the large town of Mansoura, celebrated in the history of the crusades for two great battles, in one of which St. Louis was defeated and taken prisoner. Lastly, four or five miles above the mouth of the river is the city of Damietta, which, though on the eastern bank, belongs properly to the interior Delta, as forming the chief market for its productions. Rice of excellent quality, and in great abundance, is grown in its vicinity, and, with coffee brought up the Red Sea, forms the staple article of export to Syria and the Levant. Tobacco and soap are imported from Syria; and luxuries of all kinds from Constantinople. The town is large, but ill built and without ornament. It is chiefly inhabited by fishermen and janissaries, and devoted to trade, of which a great part is contraband. The people are said to be the very worst in all Turkey, and to have a particular hostility to Christians, which seems to have descended from their ancestors in the time of the Crusades. Damietta has no harbour; vessels anchor in a road by no means remarkably safe, at the mouth of the river, and the goods are brought up in boats.

The base of the Delta, or the coast between Rosetta and Damietta, remains to be described. It consists, for eight or ten miles inland, of desert and marshy sand, and more than half its breadth is filled by the lake Bourlos, about twenty miles in length, and six in breadth. Like Mareotis and Edko, it is shallow, and separated from the sea by a narrow ridge, penetrated only in one point by a channel, which seems to be that of the ancient Sebennytic branch. This wild tract, the ancient Etearchis, is described in history as having repeatedly afforded refuge to the kings of Egypt, when driven from the throne by foreign invasion or by insurrection. It is still inhabited by a race of bold and rude fishermen, who hold themselves nearly independent of the national authorities.

The last division of Lower Egypt, and one of comparatively little modern importance, is the province of Charkieh, situated to the east of the Damietta branch, and consequently beyond any channel which can now be considered as the Nile. In ancient times, however, it was traversed by two great branches, the Tanitic and Pelusiac, flowing into the lake Menzaleh. Their channel may still be traced. M. Malus traversed the whole Tanitic branch, now known under the name of the canal of Moez, from the village about thirty miles north of Cairo, at which it strikes off from the canal of Damietta. In the lower part it changes to San, probably a corruption of the ancient Tanis. It is navigable along its whole length for small barks, and, when the Nile is high, even for vessels of some size. It would be easy for an active government to restore it to all its former importance. Even now it affords large means of irrigation, and consequently supports a considerable culture and population. The upper banks are exceedingly fertile, and even the lower contain many fine villages, though they are kept in perpetual alarm by the frequent incursions of the Arabs. Not only is every village fortified, but from place to place along the Nile are erected towers, without entrance or windows; and into these strong-holds, on the approach of a band, the inhabitants with their most precious effects are hoisted up by ropes, and kept till the danger be past. Eighteen miles below the commencement of the canal, Malus found immense ruins, which, contrary to the opinion of Pococke, he supposes to be those of Bubastis. Enormous masses of granite, more or less mutilated, and covered with hieroglyphics, were heaped together in an astonishing manner.

The course of the most easterly or Pelusiac branch may also be still traced, though much more imperfectly; the cultivation is there much inferior, and the exposure to the Arabs greater. The most important points on this line are Belbeis and Salahieh, maintained as

military posts on the Syrian frontier. The southern district between the course of these canals and Cairo, called the province of Kelyoubeh, is tolerably watered, and abounds in cattle. From this circumstance, as well as its vicinity to the head of the Red Sea, we should presume it to be the Goshen of the Israelites. All the towns in this part of Egypt being built upon huge masses of unburnt brick, with the view of defending them against the inundation, we may thence account for the excessive labour to which that people were doomed.

The lower part of the province of Charkieh is marshy and sandy, like all the rest of the Egyptian coast. It is traversed by the Menzaleh, a broad shallow lake, separated from the sea by a narrow ridge, similar to those of Mareotis and Bourlos, but much more extensive. It is sixty miles in length, and twenty-five in breadth, divided by a projecting peninsula. It abounds with fish; and the fishermen who inhabit its coasts, and the islands of Matharieh, near the above peninsula, are of the same savage, rugged, and independent character as those dwelling in the vicinity of the lake of Bourlos. It has two openings into the sea, one of which corresponds with the canal of San, the current of which is seen distinctly running across. On this peninsula is the town of Menzaleh, and six miles up the canal are seen the ruins of Tanis, the Zoan of Scripture, once a magnificent residence of the Pharaohs. There are still several Corinthian obelisks and capitals of columns fallen to the ground, and particularly some very fine antique earthen vessels, of which the glazing remains.

Subsect. 2.—*Vostani, or Middle Egypt.*

After passing the angle formed by the two divergent branches of the Nile which form the Delta, we ascend to what is called Vostani, or Middle Egypt. Here, about a league to the east of the river, appears the village of Matarieh, to the north of whose site are the ruins of the celebrated Heliopolis, the On of Scripture, and the great seat of Egyptian learning. Though almost in complete ruin, it has still some interesting antiquities; an obelisk sixty-seven feet high, several sphynxes, and large stones covered with hieroglyphics.

Cairo the Great (*fig.* 769.), or, as it is popularly called, Grand Cairo, attracts the attention of the traveller sailing upwards, and he gazes with wonder on the numerous minarets which distinguish the capital of Egypt and of Africa. Throughout that continent and Arabia, Cairo is considered as the queen of cities, as the city without a rival; its splendour forms one of the great themes of Eastern romance. Old Cairo appears to be of very great antiquity, being built on the site of the fortress of Babylon, which derived that name from being assigned as a residence to some Babylonish captives, brought, probably, by Sesostris. The new city, however, which has alone risen to the rank of a capital, was founded in 973, by the first of the Fatimite Caliphs. Saladin surrounded it with strong walls and magnificent gates; and it soon eclipsed the splendour of the now neglected Alexandria. Europeans, however, in the aspect of Cairo, find little corresponding to the ideas raised in them by Eastern description. The streets are narrow and winding; the principal one, which traverses the whole area of the city, would be considered in Europe as a mere lane. As they are not paved, a most disagreeable dust is raised by the crowds of men, dogs, camels, and asses, which press through them. The houses are two or three stories high, which is not usual in the East; but almost all their light is derived from interior courts, and they present to the street only a mass of dead wall, which makes them appear like prisons. There are, however, several extensive open squares, round which are built the houses of the principal persons. Into these, when the Nile rises, the water is conveyed by a canal called the Kalisch, and converts them into lakes, which, being traversed by pleasure-boats, present at this period a gay scene. On the retiring of the waters, these lakes become so many plains of mud, which is soon completely dried, and covered with excellent vegetation. The chief ornament of Cairo consists in its gates, several of which are built in a style of simple magnificence, and in its mosques, of which that of Sultan Hassan displays all the splendour of Saracenic architecture (*fig.* 770.). Many of the baths have their in-

Cairo.

Mosque of Sultan Hassan.

terior very richly ornamented. The tombs of the Mamelukes, also, built of white marble, and with painted or gilded domes, are very beautiful. The Pacha resides in the citadel, where he has magnificent apartments.

Cairo, according to Pococke, is seven miles and a half in circuit, and covers as much ground as Paris; but as a great part is occupied with gardens and empty spaces, it cannot, according to Volney, contain more than 250,000 inhabitants. Browne, however, reckons them at 300,000; Jomard, at 260,000; Balbi, at 330,000. The police is maintained with great strictness, each street being shut in at night with gates, and guarded by several janissaries. Notwithstanding the gloomy exterior presented by the houses even of the great, the interior of these mansions possesses great magnificence. Space and coolness are especially studied. They present wide halls, high domes, verandas, rich sofas and carpets, walls adorned with sentences of the Koran, and with foliage and flowers. The habits of life are recluse; the only great festivals are those of marriage and circumcision, when families bring all their wealth into full display.

Cairo is perhaps the greatest thoroughfare of any city in the world. All the merchandise which passes between the Mediterranean on one side, Upper Egypt and Arabia on the other, must be conveyed through it. Its land communications are perhaps still more extensive, as in this respect it forms the grand link between the Asiatic and African continents. With the interior of Africa, in particular, a vast trade is carried on; and slaves are imported in very great numbers, to be exposed in the markets of Cairo. The sale takes place in the open street, where they are subjected to the most minute examination of the purchaser. According to Sonnini, the price did not exceed from eight to twelve pounds apiece. The amusements of Cairo are generally of a very humble nature; tumbling, rope-dancing, and juggling are publicly performed in the few open spaces which the city affords. For the amusement of the rich, there are improvisatory poets, both male and female, who are said to display occasional talent, though their mendicant muse is too apt to employ itself chiefly in fulsome praises of its patrons.

Old Cairo, originally of much smaller extent than the new city, is now uninhabited through a great part of its site. It is chiefly occupied by Copts, for whom it forms a sort of capital. They have twelve churches in it, some of them large and sumptuous; and their patriarch has removed his residence from Alexandria to this place. It contains also the ancient granaries, bearing the name of Joseph, which are still used for their original purpose. The place is distinguished also by an immense and skilfully contrived machine, by which the water is raised into an aqueduct for the supply of the castle of New Cairo.

The last appendage of this great city is Boulak, its port on the Nile, distinguished by the bustle of trade, and boats without number ascending and descending. It is of considerable extent, but does not present any remarkable object except very fine baths. There is an institute for 100 pupils, maintained at the expense of the Pacha.

The pyramids next claim our attention. Scarcely has the traveller ascended above Cairo, when he comes in sight of those far-famed structures, to which the world presents nothing comparable, and which cannot be contemplated without the most awful emotion.

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The Pyramids.

These mighty monuments seem to look with disdain on every other work of human art, and to contend with nature herself. They form an uninterrupted range for about twenty leagues, on a declivity sloping down towards the river (*fig.* 771.); but the first two, the pyramids of Cheops and Cephrenes, from the union of magnitude and skill in their construction, have almost exclusively attracted the attention of the world. The first or great pyramid (*fig.* 772.) is 693 feet square, covering upwards of eleven acres, and rising to the amazing height of 599 feet. In an age when machinery was imperfect, and every thing was done by manual labour, it is said to have employed 100,000 men for twenty years. The destination of this and all similar colossal structures appears evidently to have been sepulchral. The original entrance, as well as that into each successive gallery and chamber, is studiously concealed, by being made exactly similar to the surrounding wall; and it is carefully barred by huge blocks of granite, which cannot be

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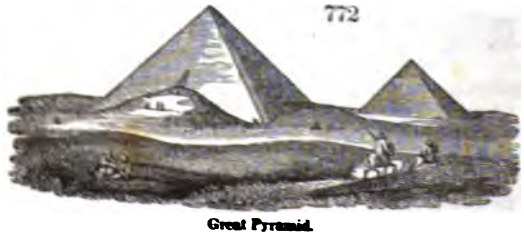

Great Pyramid.

cut through without great labour, but which, to the experienced eye, afford a sure test of the sought-for entrance. The opening of the first pyramid has been long ago effected; it is ascribed to the Caliph Mohammed, in the ninth century. Several long galleries have been traced, leading to two chambers, the largest of which is 32 feet by 16; and contains a sarcophagus now empty. The second pyramid, or that of Cephrenes, is about 400 feet high. It had defied all attempts to enter it, till the enterprise was recently achieved by Belzoni. His attempts were long unsuccessful; but at length, by the position of the block of granite placed to bar the entrance, he was enabled to trace its real direction (*fig.* 773.) At the end of a long passage, he found a chamber 46 feet by 16, in which was a sarcophagus containing a small quantity of bones. These bones were supposed by him to be human; but on being brought to London, and examined by the Royal College of Surgeons, they were pronounced to be those of the bull, that base object of Egyptian worship. Indeed, it seems every way improbable that structures so stupendous should anywhere, and most of all in Egypt, have been undertaken without a religious impulse and motive.

About three hundred paces from the second pyramid is the gigantic statue of the Sphynx (*fig.* 774.) that singular object, in the delineation of which Egyptian art so much delighted.

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Entrance to the Second Pyramid.

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Sphynx.

It has been overthrown, and, till of late, only the head, the neck, and some part of the back, were visible above the sand. The length, from the fore part to the tail, was found to be 125 feet. Mr. Belzoni, having succeeded in clearing away the sand, discovered most singular appendages, consisting of two temples, one of which it holds between its legs, and the other in one of its paws.

This part of Egypt, reaching even above Benisouef, though it does not present the same wide-spread fertility as the Delta, is by no means destitute of the benefits of irrigation. The inundation extends for a considerable space along its western bank; but, from the peculiar slope of the ground, it cannot be diffused without some difficulty. Immediately on the Nile, the ground is considerably higher than the river, whose waters must be raised with wheels moved by oxen, and with other complicated and laborious machinery. Farther on, the level descends, till it falls even below that of the Nile; but the river must be considerably swelled before its waters can reach across the high separating ridge. In seasons of low inundation, therefore, it is almost entirely deprived of water; and, even in average years, does not obtain nearly the quantity which might be advantageously employed. This evil might be entirely remedied by an active government; but in the present neglected state of the canals, the country suffers severely from it. In one part, indeed, the tract along the foot of the mountains is watered by a natural derivation from the Nile, called the canal of Joseph, the principal branch of which passes in Fayoum, while another reaches even into Lower Egypt.—(*P. D. Martin, in Descript. Egypte, Etat. Moderne*, ii. 197—202.)

Except the pyramids, this tract contains few remarkable objects. Along the Nile is a succession of tolerably large, but ill-built villages. Benisouef, somewhat handsomer than the rest, is a brick town, containing a considerable manufactory of coarse carpets. Near Metrahenny appear extensive though faint traces of the ancient Memphis, the capital of Egypt at the era of the construction of the pyramids.

To the west of Benisouef appears the province of Fayoum, truly remarkable by its physical character, even in Egypt. An opening in the elsewhere continuous Libyan chain, aided by a vast artificial cut, has let in the river upon this tract, and converted it from a desert into the most fertile portion of this most fertile land. After traversing the territory in numberless canals, this branch forms the lake of Fayoum, which antiquaries no longer hesitate in identifying with the ancient Moeris. Being only, indeed, about thirty miles in length, and four or five in its general breadth, its extent is much inferior to that ascribed to it by the ancients, who represented it as resembling a sea. Both Martin and Jomard, however, who carefully examined its environs, were convinced that the present lake may be considered as occupying little more than the bottom of its former bed. The surrounding

tract bears every appearance of having been abandoned by the waters. It is incapable of culture, covered with sand, lagoons, saline crusts, and some shrubs of a weak vegetation. On the northern side, Martin saw a number of detached hillocks, bearing every mark of having once been islands, and is convinced that the lake formerly extended to the foot of the mountains which bound the prospect in that direction. It has been deemed impossible, considering the vast extent of the hydrographic features of this province, that they should, as antiquity records, have been the work of art. To have turned the waters of the Nile into this lake, would, it is urged, have required the removal of 3,200,000 cubic yards of earth or rock. Reflecting, however, on the stupendous magnitude of the works executed by the ancient sovereigns of Egypt, we are reminded that, among all their wonders, this has been celebrated as the most wonderful. To Jomard, both the passage through the mountain, and the channel of the Bahr Belama, by which the lake was fed, appeared to display evident marks of artificial excavation. The Mœris formed the grand sluice of Egypt, which drew off the waters when they were superabundant, and afforded a supply when they were deficient. Some of the dikes which were employed in alternately retaining and letting out the water, and which still remain, present indications of an extent of labour truly stupendous.

Fayoum appears to enjoy a pre-eminence, as to soil and products, over every other tract of Egypt. According to Jomard, the eye is never weary of contemplating its smiling fields, watered by a thousand canals, which maintain a perpetual freshness, and whose aspect forms the most striking contrast with the bordering deserts of Libya. Besides yielding rice and grain in equal abundance with the other provinces, it abounds in dates and flax, and produces almost exclusively fine fruits. Here the olive and the vine come to perfection, and the plantations of roses afford materials for a perfume highly valued throughout the East. The objects, however, for which this country has been chiefly visited by travellers, are its antiquities; for, besides the lake of Mœris, tradition assigns to it the famous Labyrinth of Egypt, which held so high a place among ancient wonders. Great difficulties, however, have occurred in tracing its site. Attention has been mainly attracted by an edifice situated about a league from the western extremity of the lake, in a tract now uninhabited, but where the ruins of a number of large villages have been lately discovered. The temple is stated by Pococke at 165 feet long, and 80 broad; but these dimensions appear to be those of the whole enclosure; for the edifice itself is described by Jomard as only 90 feet long, by 50 broad. There are some large apartments, adorned in the Egyptian style, though without any particular magnificence; but the most remarkable feature is a long narrow passage, or rather hole, ending in a cell 6 feet by 4. Jomard penetrated into it, and, finding it extremely sonorous, and skilfully adapted for the conveyance of the voice along the passage, infers that it was destined for the emission of a pagan oracle. Upon the whole, his observations and those of Belzoni (Researches, pp. 384, 385.) seem clearly to show that neither in its magnitude, the disposition of its apartments, nor in any other feature, does this structure bear the least resemblance to the famous temple of the Labyrinth, for which, as the most entire and conspicuous remaining in Fayoum, it has long been implicitly taken. Jomard is generally supposed to have been more successful in another quarter. About six miles south of Medinet el Fayoum is a lofty brick pyramid, near which is an extent of ruins about 900 feet in length, and 400 in breadth. This whole space is covered with heaps of hewn stones, and various materials confusedly piled upon each other; though, on penetrating through this rubbish, some vestiges of walls are discovered. The enclosing wall on the side of the pyramid, and some little towers with which it was flanked, are the parts best preserved. Upon the whole, he observes that there is little in these remains to justify the pompous descriptions of the ancients, and cannot but express his astonishment that an edifice which, in the time of Pliny, thirty-six centuries from its foundation, remained perfectly entire, should since his time have been so completely destroyed. He supposes that the mass of the building must have been buried in the sand, and that the visible ruins are only those of its terraced roofs. There are some minor discrepancies; but, upon the whole, the vicinity of the pyramid, the position, the extent, and, above all, the absence of any other ruins within the region, which can at all correspond with the magnitude which the ancient descriptions assign, seem to leave us no alternative but to accept this as all the trace that will ever be found of the famous Labyrinth of Egypt.

Amid the peculiar interest of the antiquities of Fayoum, we had almost forgotten its modern dwellings. Medinet, the capital, however, is a fine town, built near the ancient Arsinoë, and of materials taken from its ruins. All that remains of the latter city is a mere heap of stones and rubbish; but whatever was fine in its columns and fragments is found irregularly inserted into the modern town. Medinet is situated upon the canal of Joseph, immediately before its separation into nine branches. The place is flourishing, contains some fine mosques, and is surrounded by beautiful gardens. The population is reckoned at 5000; a considerable part of whom are Christian.

Returning to the Nile, and ascending above Benisouef, we pass through a tract, still very fertile, more varied and beautiful than the Delta; and where towns and villages occur every-

where at short intervals. Minieh, or Minget, capital of an extensive district, is a very pretty town, whose mosques are adorned with magnificent columns of granite and porphyry, of Greek architecture. To the west of the city, there are also vestiges of antiquity, entirely, however, converted into rubbish. The markets of Minieh are crowded, its population considerable, and it contains a manufactory of those earthen vessels for cooling water, which are so much valued in Egypt. To the west of Minieh is a large lake, or rather swamp, called the Bathen. It extends southward as far as Achmounein, and is of large and vague breadth, but seldom more than a foot or two deep. It seems to be on very slender ground that Sicard and D'Anville identify this inundated surface with the lake of Mœris.

Above Minieh, the Arabic chain on the east of the Nile is pierced by numerous and most extensive ancient quarries, which have converted it from a sloping face to one of perpendicular rock, and have caused it in one place to present the appearance of an immense fortified castle. The rocks are also excavated into a number of those tombs, to which the ancient Egyptians devoted their labour and their art. These are particularly remarked at a place called Zayonet el Mayetain, or the Village of the Dead, and farther up, near Benihassan. The interior, as in those on a greater scale at Thebes, is adorned with numerous hieroglyphics, and with paintings, which exhibit the most brilliant colours, and represent various particulars of the manners and domestic life of the ancient Egyptians.

We now approach antiquities of a more classic character. As yet, Egypt has presented to us only monuments which astonish by their immensity, and by the incredible labour bestowed on them; but in those to which we allude, that vastness is combined with a high and peculiar architectural skill. About ten miles above Minieh, we pass between two of these grand masses of ruins. On the eastern bank are those of Antinoë (*fig.* 775.), bearing a very different character from any others which Egypt now presents. They are remains of a Greek city, founded by Adrian, with the design of uniting the elegance of classic architecture with the colossal grandeur of the Egyptian. In order to produce the same impression of grandeur, he made streets extending the whole length of the city, and forming one continued and immense colonnade. Here are no colossal statues, obelisks, palaces, temples and tombs of gigantic dimension; but amphitheatres, triumphal arches, thermæ, and hippodromes. The ruins of Antinoë extend about a mile in every direction, amid a wood of date trees, above which its columns are seen towering; they form a grand picture, to which the lofty and naked Arabian rocks form a noble background. The theatre with its portico, the hippodrome, the principal street, a triumphal column raised to Alexander Severus, a triumphal arch, and a great gate, may still be traced. The piles of fragments and rubbish are of very uncommon magnitude. Shekh Abade, close to Antinoë, is a pretty large village, inhabited by Arabs, and surrounded with considerable plantations of sugar-cane.

Ruins of Antinoe.

The other side of the river presents the site of Hermopolis Magna, where Greek, Roman, and Egyptian ruins are mingled on a most extensive scale. Their length is about 7000 feet, their breadth 5000, and their circuit nearly three miles. The greater part of this space is covered with rubbish, detached stones, and fragments of columns. The only part which remains entire is the portico of the great temple, a most magnificent monument, rivalling the greatest of which Egypt can boast. It consists of twelve columns, but there are indications that twenty was the original number. The whole length is 120 feet; the architrave and frieze consist of five stones which are 20 feet long; and the single stone which remains of the cornice is 34 feet long. The shafts are 80 feet 10 inches in diameter, and 60 feet high.

At one extremity of these ruins is situated Achmounein, a large and populous village, containing 5000 souls. Its territory, of about ten miles in breadth, between the river and the mountain, is under peculiarly high cultivation, being watered by numerous channels from the Nile and the canal of Joseph. Six miles above is Melawi, also a neat and considerable town, having some manufactures, and exporting a good deal of grain to Mecca. Considerably higher is Manfalout, still more important from its extent and beauty, and which combines considerable manufactures of cloth with a trade in grain.

Subsect. 3.—*Said, Thebaid, or Upper Egypt.*

After Manfalout, Middle Egypt, the Vuestani or Vostani of the moderns, the Heptanomis of the ancients, terminates, and Upper Egypt, the Thebaid of the ancients, the Said of the moderns, commences. Egypt, which in the Delta was a wide inundated plain, which in the Vostani became a broad well-watered valley, is here little more than a mountain glen. Still, however, though less fertile and populous, it presents objects which, in interest and

grandeur, surpass all the most remarkable in the lower and more level tracts of this extraordinary country.

Siout is the first large town of Upper Egypt, which has not here assumed the narrow and contracted aspect peculiar to other parts of the Thebaid. On the contrary, this part of the valley of the Nile is upwards of twelve miles broad, though the river itself has not a breadth of more than 750 feet. Siout has a large district attached to it, which is very fertile in wheat, barley, dhourra, flax, and contains very fine gardens. The population is reckoned at 200,000, and the taxes at 40,000*l*. The city is large and populous, and carries on a considerable trade in linen cloth, earthenware, natron, and opium. This also is the point from which the caravans of Nubia and Darfour usually depart, and to which they return. Behind the city are a number of country houses erected by the Mamelukes, partially fortified. There are no remains of ancient edifices, though trunks of columns adorn the houses of several of the principal inhabitants. The face of the mountain, however, which is about two miles to the west, is excavated into grottoes throughout its whole extent. The greater part of these are ancient Egyptian tombs, lavishly adorned with hieroglyphics and paintings. Others are the retreats of Christian hermits, who, in the first centuries, were induced by a mistaken devotion to bury themselves in the savage recesses of the Thebaid. Small niches, stucco facings, a few rude paintings representing crosses, and some Coptic inscriptions, are all the traces they have left of their abode in these cells. It seems ascertained that Siout stands on the ground formerly occupied by the city which, in the time of Ptolemy, was called Lycopolis.

The first great monuments of the Thebaid which strike the eye of the traveller are those of Antæopolis (*fig.* 776.), situated at the village of Kau, or Gau, on the eastern bank of the Nile. Traces are here found of a temple 230 feet long, and 150 broad; but the only part at all entire is the first portico, about 50 feet high. The columns produce a peculiar effect, their capitals being composed of the leaves of the date palm tree, and being surrounded with groups of those trees, of which they present a faithful copy, and with which they are confounded. The village of Kau is poor, and the surrounding territory indifferently cultivated.

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Ruins of Antæopolis.

Close to it is a mountain remarkable for the immense excavations made in it for the purpose of building; one of these quarries is stated by Jomard as 600 feet by 400.

After passing the two small towns of Tornieh and Tahta, we come to Akhmym, or Ekhmim, a neat town, with wide streets, though built only of unburnt brick, and containing several handsome mosques with lofty minarets. The population is estimated at 10,000; the full half of whom are Christians, and even the Sheiks have been suspected of Christianity by the government of Cairo. Commerce and agriculture, which always flourished here, continue prosperous; but its fine manufactures of linen are changed into those of cotton, and its elaborate works in stone into earthenware, which is transported, however, throughout all Egypt. Near it are the remains of two great temples, evidently part of the city called Chemnis by the Egyptians, and Panopolis by the Greeks.

About eighteen miles south-east of Akhmym is Girgeh, or Girshe, the capital of Upper Egypt. Notwithstanding this proud distinction, it is not so large as Siout, being about the size of Manfalout, Minieh, and other secondary towns. Neither is it particularly handsome; but it is situated in a very fertile country, and all provisions are extremely cheap and abundant. During Denon's residence, 3000 Frenchmen were quartered there for three weeks, without causing the least appearance of scarcity. The name is derived from an ancient monastery dedicated to St. George, pronounced here Girgeh.

Near this city, five miles west from the Nile, on the canal of Joseph, and on the borders of the desert, the French discovered the remains of Abydos. This city was accounted by the ancients the second in the Thebaid; it contained a palace of Memnon, and the tomb of Osiris: works by the same hands which constructed those of Thebes. It had the misfortune, however, of being situated at the end of a long valley crossing the mountains, and through which the sands of the boundless western deserts were blown in upon it. Plantations, canals, and all the expedients which were employed during the prosperous times of Egypt to preserve Abydos from the encroachments of these sands, could not avert its destiny. Not only is it in ruins, but these ruins are almost buried. They may be entered, however, by the roof, where spacious interior apartments are found entire, and adorned with hieroglyphics and paintings, of which the colours are as fresh and brilliant as in the first day they were painted. Jomard particularly admired the lower part of a kneeling statue, of human

size, in black granite. This fragment appeared to him perhaps the most beautiful that had ever come from the Egyptian chisel. Only two miserable villages now exist on the site of these great ruins.

In ascending above Girgeh, the traveller passes by Farshout, a poor-looking town, containing, however, a considerable manufactory of sugar; and Hen, a long village, on the site of the ancient Diospolis, but presenting no remains of it. He then arrives at Keneh, a town of some consequence, and remarkable for its fabric of earthen vessels. Pococke met large floats coming down the river, containing jars placed on a frame-work of twined palm branches, and thus raised stage above stage. Four long poles, like oars, were employed to direct the boat. The curious observer, however, hastens across the river to Dendera, two miles to the west of which are the ruins of Tentyra, justly ranking with the most remarkable of which Egypt can boast.

The ruins of Tentyra cover a space of about a mile in length, and half a mile in breadth. The greater part of this ground is overspread with mere fragments and rubbish; but one part presents a temple (*fig.* 777.), which, though it cannot cope in grandeur with the monuments of Thebes, surpasses in art and skill every thing else in Egypt. The spectator feels, as it were, transported into a fairy scene of enchantment; he sees monuments which have no affinity with the products of Grecian architecture, or with those created by the taste of modern Europe, yet which present exquisite beauty, and a magnificence the most imposing. The length of the temple is 265 feet, and 140 broad.

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Portico at Dendera.

The portico, above all, inspires astonishment by the grandeur and singularity of its aspect. It consists of six columns, the capitals of which are formed of colossal heads of Isis, the deity in whose honour this temple appears to have been reared, and to whom almost every thing in it has reference. The height of the portico is sixty feet; but that of the general wall of the temple not more than seventeen. The whole is entirely covered over with those mystic, varied, and often fantastic sculptures (*fig.* 778.), which characterise Egyptian architecture; hieroglyphics, groups, figures of deities, and sacred animals; the whole of the

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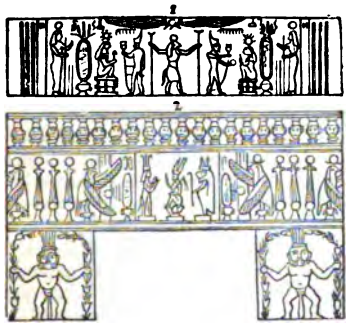

Part of a Sculptured Wall at Dendera.

779

Interior of Temple at Dendera.

manners and mythology of ancient Egypt embodied. The workmanship is of the most elaborate execution, and highly finished. The interior (*fig.* 779.) of the portico is equally beautiful and striking. It composes a rectangle 120 feet by 67, and is supported by 24 columns, ranged in six rows of four deep. The ornaments are equally profuse and varied; but the roof formerly presented a feature which strongly fixed the attention. Divided into twelve compartments, it exhibited, by a variety of mythological figures, many of which coincide with those employed by the Greeks, a representation of the twelve signs of the zodiac. This remarkable monument has been detached from the roof and conveyed to Paris.

From the contemplation of these monuments has arisen a question, certainly of deep interest in the history of art. It was never doubted that they had been erected by the early and native kings of Egypt, until Visconti, in his notes to Larcher's edition of Herodotus, endeavoured to prove them to be of much more recent date. The structure of the zodiac appears to indicate, that the commencement of the Egyptian year answered then to the sign of Leo, which would take place between the years 12 and 132 of the Christian era. This opinion is strengthened by a Greek inscription on the front of the cornice, first observed by Denon, and since copied by Mr. Hamilton, in which the pronaos is dedicated to Aphrodite, and the reign of Tiberius assigned for the date of the dedication. These reasons appear

irresistible to Dr. Young, in his very learned dissertation on the antiquities of Egypt, in the Supplement to the Encyclopædia Britannica. On the other hand, Jollois and Devilliers urge, with a good deal of plausibility, that the erection of edifices thus entirely in the style of a conquered people, was quite foreign to the custom of the Romans, and that no similar instance can be adduced; while it seems impossible that a structure of such extraordinary magnitude and splendour could have been erected at such a period, and yet no record of it have been preserved in history. The dedication of the *pronaos* to Aphrodite, who is essentially the same with Isis, might have been prompted in that ambitious people by the desire of taking possession, as it were, of so magnificent a monument, and marking its front with the name of one of their emperors. They conceive that the edifice was erected under the later kings of Egypt, at a period when Egyptian art had risen, through successive stages, to its highest pitch of perfection.

About ten miles above Keneh and Dendera is Keft, the ancient Koptos; and higher still, Kous, the ancient Apollinopolis Parva. These, under the Ptolemies, and even under the Saracen princes, were places of great wealth and importance; for opposite to each is an opening in the mountains, through which is the caravan route to the ancient Berenice and the modern Cosseir. Through the loss of the trade to India, and the transference of that of Arabia and Suez to Cairo, this communication is now become of very little importance. Even the few modern caravans which proceed in this direction take their departure from Keneh. Both Keft and Kous, therefore, are now poor towns, containing many uninhabited houses, and ruins that belong to all the ages of Egyptian history. Kous, in particular, presents the portico of an ancient Egyptian temple, of which the entablature only appears above the rubbish, but with a beauty almost rivalling that of Dendera. These towns are inhabited chiefly by Christians, and are surrounded by gardens, which appear beautiful to those who have newly passed the desert.

Above Kous, for some miles, is a sandy plain, after which the rocks approach close to the river. Beyond a projecting point, however, the view opens upon a scene to which the world presents nothing parallel; an extensive plain, covered almost throughout its whole extent with the most amazing ruins. This is Thebes; the city of the hundred gates, that mighty capital, the foundation of which is unknown in history, and belongs only to the dim ages of traditionary poetry, whose report would have been denounced as fabulous, had not such mighty monuments proved that it fell short of the reality. This work of the first age of the world almost eclipses, as to grandeur, all that art and power have since produced. At first, the observer sees only a confusion of portals, obelisks, and columns, all of gigantic size, towering above the palm trees. Gradually, he is able to distinguish, on the eastern or Arabian side, the palaces of Karnac and Luxor; on the western or Libyan side, Medinet, Abu, the Memnonium, and the tombs cut in the mountain behind.

Karnac (*fig.* 780.) surpasses in grandeur every other structure in Thebes and in the world.

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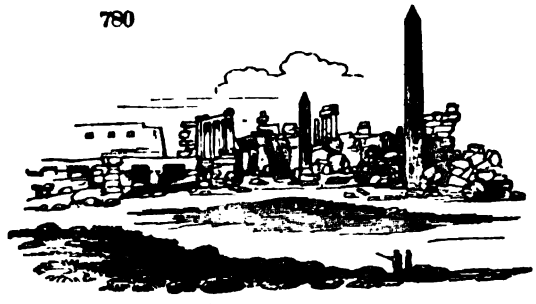

Ruins of Karnac.

The French engineers on horseback were an hour and a half in performing its circuit, which they therefore conceive, cannot be less than three miles. On the northeast entrance the Egyptians appear to have lavished all their magnificence. The approach is by a long avenue of sphynxes, the largest of any in Egypt, leading to a succession of portals with colossal statues in front. These structures are distinguished, not only by the grandeur of their dimensions, but by the variety of the materials. A calcareous stone, compact like marble, a variegated siliceous limestone, beautiful rose-coloured and black marbles of Syene, have been severally used. "Most points of view present only the image of a general overthrow, rendering it difficult to distinguish Karnac as a series of regular edifices. Across these vast ruins appear only fragments of architecture, trunks of broken columns, mutilated colossal statues, obelisks, some fallen, others majestically erect; immense halls, whose roofs are supported by a forest of columns, portals and propylæa, surpassing in magnitude all similar structures. From the west, this chaos assumes an orderly appearance; and the almost endless series of portals, gates, and halls appear ranged in regular succession, and harmonising with each other. When the plan is thoroughly understood, its regularity appears wonderful; and the highest admiration is excited by the arrangement and symmetry of all the parts of this vast edifice."

Not only the general extent, but all the particular features, of this extraordinary structure are distinguished by a magnitude elsewhere unparalleled. There are two obelisks of 69, and one of 91, feet high: this, the loftiest of any in Egypt, is adorned with sculptures

of perfect execution. The principal hall (*fig.* 781.) is 318 feet long, and 159 broad, having the roof still supported by 134 columns. These are about 70 feet high, and 11 feet in diameter; and a long avenue of others have all, except one, fallen down entire, and lie on the ground, still ranged in their primitive order. All the sculptures are adorned with colours, which, though they ought, it should seem, to have most experienced the ravages of time, shine still with the brightest lustre. Of the large sphynxes, fifty are still remaining, and there are traces which show that the whole avenue once contained 600. The palace itself is entered with great difficulty, and its interior, being dark and filled with rubbish, presents few objects to attract the attention; but on reaching the roof, the spectator enjoys a distinct and most magnificent view of the whole range of surrounding ruins. All who have visited this scene describe the impression made by it as almost superior to that caused by any other earthly object. According to Denon, the whole French army, on coming in sight, stood still, struck as it were with an electric shock. The scene, according to Jollois and Devilliers, appears to be rather the produce of an imagination surrounding itself with images of fantastic grandeur, than any thing belonging to real existence. Belzoni, in particular, declares that the most sublime ideas which can be formed from the most magnificent specimens of our present architecture, would give a very inadequate picture of these ruins. It appeared to him that he was entering a city of departed giants. He seemed alone in the midst of all that was most sacred in the world. The forest of enormous columns, adorned all round with beautiful figures and various ornaments; the high portals seen at a distance from the openings to this vast labyrinth of edifices; the various groups of ruins in the other temples; these, altogether had such an effect upon his mind, as to separate him in imagination from the rest of mortals. For some time he seemed unconscious whether he was on terrestrial ground, or on some other planet.

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Hall at Karnac.

If Karnac is unrivalled in the grandeur and extent of its remains, the temple of Luxor, as a single and beautiful object, seems superior to any thing else in Egypt. The view from the river is peculiarly beautiful, when, across the verdant islands with which it is studded, appears a white plain covered with palm trees, over which these colossal masses throw their shadows; while, behind, the Arabian mountain chain forms the boundary of the landscape. The approach is through the village of Luxor, whose crowded and miserable huts form a strange contrast with these monuments of ancient splendour. At length the portico appears, by the sides of which are seen the two most beautiful obelisks in the world (*fig.* 782.), each rising to the height of eighty feet, yet composed of a single block of the finest granite, from the quarries of Syene. By what means such colossal masses were conveyed to so great a distance, and placed in their present position, surpasses the conception of modern art. Behind them are two colossal statues, now studiously defaced, and deep sunk in the sand, but which must have been forty feet high, and composed of a single block of the same granite. The propylon is 200 feet in height, rising fifty-seven feet above the present level of the soil. The interior is equally grand. It presents to the view upwards of 200 columns of different dimensions, many of them ten feet in diameter, and most in an entire state. But nothing is more remarkable in this edifice, than the profusion of sculptures with which the obelisks, the walls, and all the apartments are covered. These, indeed, are favourite ornaments on all the Egyptian edifices, and remarkably frequent in the palace of Karnac; but they occur here in unexampled profusion, and executed with as much care and delicacy as if they had been the work of the most skilful seal-engraver. They appear to represent the history and triumphs of an ancient Egyptian sovereign, probably the founder of the edifice. One compartment, in particular, exhibits a great battle, in which the Egyptians, armed with bows and

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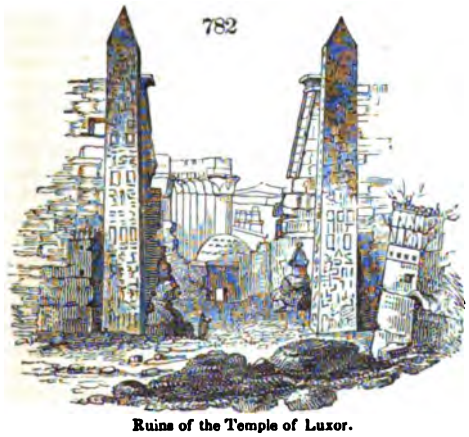


Ruins of the Temple of Luxor.

arrows, gain a complete victory over their Asiatic enemies, armed with the spear and javelin. The forms of pursuit and retreat, the attitudes of the victors, the wounded, and the dying, are so varied and striking, that Mr. Hamilton imagines it probable, this and a similar representation at Karnac may have furnished Homer with materials for many of the varied descriptions with which his narrative is filled. In another compartment, the conqueror is represented as seated on his throne, while the captive monarch is fastened to a car, and the chiefs are treated with all that studied and ruthless cruelty which the ancient laws of war were supposed to authorise.

The western or Libyan side of the Nile presents monuments of the grandeur of Thebes, which, though not of the same stupendous magnitude, are, perhaps, equally interesting. The Memnonium, or, as the French writers seem rather to show, the tomb of Osymandyas, and the temple of Medinet Abu, present, though on a smaller scale, architecture and painted sculpture of the same character; equally excellent, and in many cases still better preserved. This is particularly observable in regard to the brilliancy of the gold, ultramarine, and other colours. The Memnonium is distinguished by three colossal statues, one of which is within the edifice, and the two others (*fig.* 783.) are in the plain adjoining. The former is entirely broken into fragments, which, being dispersed through the court, cover a space of sixty feet square, giving it the resemblance of a quarry. The form of the head, however, may still be traced, though the face is entirely mutilated; a foot and a hand have been found among the fragments. The ear is three feet long; the distance from shoulder to shoulder is twenty-two feet; and the entire height of the statue appears to have been about fifty feet. It was composed of a single block, which must have weighed 2,000,000 lbs. The French writers, in the Description Historique, adduce strong reasons for judging it to be the statue of Osymandyas. The two statues placed on the plain, and called by the country people Iama and Chama, are still standing, but mutilated to such a degree that it is impossible to judge of the merits of the sculpture. One of them, from the numerous inscriptions, appears evidently to have been the vocal statue of Memnon, celebrated by the ancients as emitting a musical sound at sunrise or when struck at particular times of the day. No modern visiter, however, has been able to elicit more than the usual sound made by percussion upon granite; and there seems no doubt that the musical tones were produced by some contrivance of the Egyptian priests. Amid these huge mutilated colossi, attention has been strongly attracted by another of smaller dimensions; but of which the head, detached from the body, has been found in a state of perfect preservation. All travellers have admired its elegant simplicity and pleasing expression, and have considered it the most perfect specimen of Egyptian sculpture which is to be found entire. The authors of the Description would have been tempted to believe it a production of the Greeks during the most brilliant period of the art, had it not borne evidence of that Egyptian style, which the Greeks never imitated, and which cannot be mistaken. This head, through the very great exertions of Belzoni, was embarked on the Nile, conveyed to London, and is deposited in the British Museum.

783

Memnonian Statues.

The tombs of Thebes remain to be noticed. The rocks behind conceal in their excavated bosom these monuments, less vast, indeed, than those now described; but of a still more striking and peculiar character. In all the Oriental countries peculiar honours are paid to the dead; but no nation appears to have equalled the Egyptians in monumental works. Wherever the remains of a city have been investigated, the mountains behind have been found excavated into sculptured tombs; and those of Thebes, as might be expected, surpass all the others in number, extent, and splendour. The Libyan chain, which presents for about six miles a perpendicular height of 300 or 400 feet of limestone rock, has appeared peculiarly suited for such elaborate sepulchres. These subterranean works of the Egyptians almost rival the monuments which they raised on the surface of the earth. Entrance galleries lead into large apartments, in which are placed the sarcophagi, and which are profusely decorated with that species of coloured sculpture with which they lavishly ornamented their walls. The deceased lies surrounded with representations of all the objects which formed his pride and occupation while living. A complete picture is thus exhibited of the domestic life of the ancient Egyptians; and many of the customs there indicated have been transmitted unaltered, and are still characteristic of the nation. Festivals, agricultural operations, commercial transactions, hunts, bull-fights, fishing and fowling scenes, vineyards, ornamented grounds, form the varied subjects of these representations. The chambers and passages adjoining contain numerous mummies, in that wonderful state of preservation which the Egyptians had the art of securing to the mortal remains of their ancestors. They are found wrapped up in successive folds of linen or cotton cloth, impregnated with bitumen, and so

skilfully applied, as to preserve almost unaltered the form of the features and of the minutest parts of the body. Many of them contain, wrapped in their folds, papyri covered with hieroglyphical writing, an object of eager research to the European antiquary. Belzoni gives a very lively description of the difficulties attending this search. "A vast quantity of dust rises, so fine that it enters the throat and nostrils, and chokes the nose and mouth to such a degree that it requires great power of lungs to resist it and the strong effluvia of the mummies. You must creep through narrow passages, sometimes not more than a foot wide, after which you come to a more commodious place, perhaps high enough to sit. But what a place of rest! surrounded by bodies, by heaps of mummies, in all directions. After the exertion of entering into such a place, through a passage of 50, 100, 300, or perhaps 600 yards, I sought a resting-place, found one, and contrived to sit; but when my weight bore on the body of an Egyptian, it crushed it like a band-box. I naturally had recourse to my hands to sustain my weight, but they found no better support; so that I sunk altogether among the broken mummies, with a crash of bones, rags, and wooden cases, which raised such a dust as kept me motionless for a quarter of an hour, waiting till it subsided again."

The ancient Egyptians took the most jealous care to prevent any one from penetrating into these repositories of their dead. The entrances were closed with the greatest care by large stones, so united with the neighbouring rock as to prevent, if possible, any suspicion that they existed. It has required the most eager research of the moderns to penetrate into these subterraneous abodes. The cupidity of the Arabs, however, stimulated by the chimerical expectation of finding hidden treasures, has, in many instances, overcome every obstacle. The district immediately contiguous to Thebes is inhabited by a peculiar race, who maintain a fierce independence, and have scarcely, unless when compelled by the sword, owned the sovereignty of any government established in Egypt. They have taken up their abodes in many of the tombs, and eagerly employ themselves in searching their recesses for papyri and other antiquities, which they dispose of at high prices to European antiquarian travellers. This speculative traffic, however, has been on the whole injurious to them, by rendering their habits still more disorderly, and diverting their attention from regular industry and cultivation.

These monuments of private individuals, however, are far surpassed by the tombs of the kings. At a small but highly finished temple, called El Ebek, a narrow gorge or ravine leads by a winding track into the heart of the Libyan mountains. At the end of two miles, a narrow chasm between rocks opens into "the valley of the tombs," a gloomy solitude, presenting the arid and desolate aspect of the most frightful desert. High mountains with rocky summits bound the horizon on all sides, and allow only part of the sky to appear. The heat reflected by them is so violent, that, in 1799, it killed two of Dessaix's escort; and there would be no possibility of enduring it, but for the shelter which the tombs afford. In this awful solitude, the ancient Egyptians sought to seclude from every human eye the magnificent monuments of the kings of Thebes. Avarice and curiosity, however, have triumphed over every precaution. All had been done to secure the entrance. The huge mass of stone which bars it, opens, when penetrated, into a narrow and intricate passage, closed by successive gate after gate. At length, entrance is found into a spacious chamber, in the middle of which is the sarcophagus, commonly empty, while the walls are adorned with painted sculpture, in the highest style of Egyptian magnificence. The subjects are of a different character from those found on the walls of the temples. They frequently consist of funeral processions, religious mysteries, sacred animals; a globe, the emblem of eternity; and Osiris judging the dead (*fig.* 784.). The eye, however, is often shocked by the representation of a number of victims newly beheaded, and streaming with blood, while others are led to share the same fate. This seems too strongly to suggest the savage mode of honouring the royal funeral by sacrificing over it a number of captives. The high preservation of these paintings is the more remarkable, as they are in general executed, not on the solid rock, which is here too hard to be susceptible of such ornaments, but on a soft plaster or stucco, which, however, has preserved them unaltered during several thousand years.

784

Presentation to Osiris.

At the time when Belzoni began his operations, ten of these tombs had been opened, and were accessible. That enterprising traveller succeeded in opening several; but there was one, of which the entrance had been so carefully concealed, that it long defied his efforts. At length, he found a stone similar to that which had formed the opening into the second pyramid, and was able to penetrate. After making his way through accumulated obstacles,

he arrived at a sepulchral chamber, similarly adorned with the others, but far surpassing all the rest in magnificence. In the centre was a sarcophagus nine feet five inches long, and three feet five inches wide, composed apparently of alabaster, though it has since been found to be aragonite. Both the inside and outside are covered with sculptures, most minutely and carefully executed, and representing several hundred figures, each about two inches in height. The subject appears to be the obsequies of the deceased, in which are introduced a number of foreign captives, among whom the Jews are distinguished by their physiognomy and complexion, the Ethiopians by their colour and ornaments, and the Persians by their dress. This entirely agrees with the inference which the learned observation of Dr. Young has drawn from the hieroglyphical inscriptions, that this is the tomb of Necho and Psammeticus, the former of whom is mentioned in Scripture as having made successful war against Judea and Assyria; and the latter is known by an expedition against the Ethiopians. This remarkable sarcophagus was, by the exertions of Belzoni, transported to England, and is now placed in the Museum at Cambridge.

A full idea of ancient Egyptian painting and sculpture may be formed from the numerous specimens preserved in these tombs, as well as upon the walls of the Theban edifices. These arts are practised in a very peculiar style. The figures are first cut out in a certain degree of relief, and the colours then laid over them. All that belongs to drawing is performed by the chisel. It has merely, however, distinguished the figures by cutting away the stone round them, so that only the profile is exhibited, and the whole appears as a flat surface. The drawing of the figure, too, is far from being always correct. At the same time, a great deal of spirit and invention is displayed in the groups, and the expression of the heads is often very forcible. The painting process is still more simple. It consists merely in laying on the simple colours of red, blue, green, yellow, and black. No attempt is thus made to imitate that variety of tints with which nature adorns her works. The colours are remarkably bright, and have proved wonderfully durable; but these merits seem rather to belong to the chemist than to the artist. The only merit which the latter can claim is that of the harmonious distribution of them.

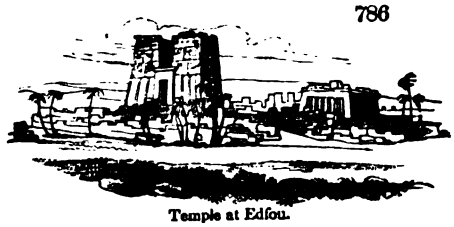
The village of Erment, about six miles above the southern limit of Thebes, on the site of Hermonthis, contains still a temple of second-rate magnitude, dedicated to Typhon. It gives, in some respects, a better idea of ancient Egyptian architecture than any other, no part being either sunk in the ground or covered with rubbish. It has also remained uninjured by time, and might have been still entire, had not great part of it been studiously demolished by human hands.

About twenty miles above Erment is Esneh, capital of the most southern district of Egypt, and the last great town which occurs in ascending the river. It is situated in a plain of considerable extent, formerly watered and rendered fertile by canals derived from the Nile; but, these being now neglected, cultivation is confined to the immediate vicinity of the river. Esneh, prior to the administration of Mohammed Ali, was almost politically separated from Egypt, having become, amid the frequent civil wars with which that country has been distracted, the usual refuge of the vanquished party. The military chiefs, however, who preserved here a remnant of power, generally used it for the purposes of oppression and extortion, which were exercised particularly upon the agricultural classes. The town itself displays a luxury and industry not usual in Upper Egypt. It has manufactories of fine blue cotton, shawls, and pottery, and carries on a considerable trade with Sennaar. A great part of this industry is in the hands of about 300 Coptic families. The portico of the temple of Esneh (*fig.* 785.), belonging to the ancient Latopolis, is remarkable for its beauty, which surprises even those who have seen the grandest of the monuments of Egypt. Its chief merit consists in an antique purity of style, peculiar to itself; and it was viewed by Denon as one of the most perfect ancient monuments. It is not peculiarly distinguished by its magnitude; the columns, twenty-four in number, are about 35 feet high, and 17 feet in circumference. The zodiac, with which its cupola is adorned, forms one of the most remarkable monuments of ancient science, and has given rise to much controversy.

785

Portico of the Temple at Esneh.

786



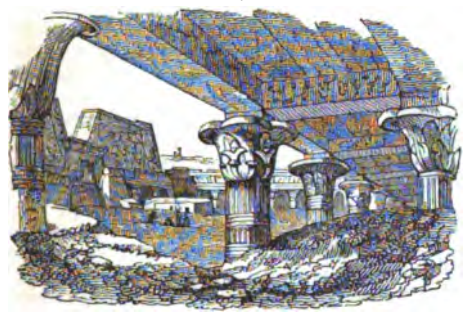
Temple at Edfou.

At Edfou, thirty miles higher, towards the extremity of habitable Egypt, is found still another monument, which, according to Jomard, may be compared, for the happy conception of the plan, the majesty of

the composition, the execution and richness of the ornaments, to whatever is most magnificent in architecture. Denon conceives that, if that at Tentyra is more learned in its details, this at Edfou (*fig.* 786.) has more grandeur as a whole. It is 484 feet in length, 212 in breadth; and there is no Egyptian edifice of the same dimensions in equal preservation. In the interior court (*fig.* 787.), the eye sees almost entire the height of the grand gate of entrance, the two huge pyramidal masses, and the peristyle of thirty-two columns, which form a most magnificent perspective.

Above Edfou, the plain of Egypt narrows extremely; the rocks on both sides in many places overhang the river. In these rocks, to which has been given the name of Gebel Silsili, are seen the immense quarries, out of which the Egyptians constructed that astonishing range of monuments which we have now surveyed. M. Rosière observes, that travellers, consulting rather their imagination than their eyes, have seen in the temples of the Thebaid some precious material; marble, the granite of Syene, or the porphyry of Arabia. He states, that, in fact, all the edifices from Syene to Dendera are constructed of the sandstone found in these quarries. They are mingled with quartz, united by a calcareous gluten; the general colour is white or gray, though marked by variously tinted spots or veins. It is very easily operated upon by the chisel; he supposes it would have cost five times the same labour to have executed on marble the numerous sculptures which cover the walls of Egyptian edifices. Some of the subterraneous quarries form grottoes, which have been adorned in a manner nearly similar to the temples. The whole of this part of Egypt presents the most dreary aspect, consisting of naked rocks, whose fragments are mingled with the sand at their feet. The Nile, which elsewhere diffuses such luxuriant fertility, has no power over these spots doomed to eternal sterility. The narrow band of verdure, which sometimes bounds one of the banks, mingled with a few earthen huts and stunted palms, seems only to make more sensible the surrounding barrenness.

787



Interior of Temple at Edfou.

In a valley amidst this solitude, however, stood the ancient city of Ombos, whose ruins are upwards of four miles in circumference, and contain two temples, much dilapidated, but bearing traces of great magnificence. Neglect, and the blowing in of the sands, have reduced the plain to a state of total desertion. The modern village on the site of Ombos contains no longer any inhabitants.

Assouan or Es Souan, the celebrated Syene of the ancients, is situated on the eastern bank at the termination of this long and dreary tract. It was remarkable, not only as being the limitary town of Egypt and Ethiopia, but chiefly as one of the grand points upon which the geographers of the Alexandrian school measured the form of the earth, and the relative position of its parts. Syene was considered as immediately beneath the tropic, and a well was formed there, at the bottom of which, on the solstitial day, the body of the sun was reflected entire. The moderns have searched in vain for this well; and the position assigned is not strictly correct, Syene being in 24° 5′ 22″ S. latitude; but, considering the imperfection of ancient instruments, this does not imply a very great error. The ancient Syene contains a temple, by no means, however, correspondent to so great a name; and, with the other original monuments, it is in a great measure buried under the remains, first of a Roman, and then of an Arab town, erected on the same site. The modern town is closely adjoining, and, though populous, is very poor, being supported chiefly by a trade in dates. The inhabitants are observed to go almost naked, a custom which is partly excused on account of the extreme heat.

Syene is surrounded on all sides by dark and rugged mountains, extending for many miles up the river. They are formed of that rose-coloured granite which, from the spot, is called syenite; but though, on fracture, it exhibits that and other brilliant colours, the surface is covered by the action of the air and elements with a dark-brown tint. For about three miles around Syene are the famous quarries, whence the Egyptians drew their granite chiefly for the edifices of Lower Egypt. The marks of the instruments employed may still be traced; the soil is everywhere strewed with pieces of various forms and dimensions, and it is still possible to discover the purpose for which many were destined. The most remarkable is an obelisk, which is 54 feet high, without reckoning its point, buried in the sand. The rocks all round Syene are covered with sculptures and hieroglyphic inscriptions.

The Nile immediately opposite Assouan encloses Elephantine, an island, the beauty of which strikes all travellers with an admiration, which they express by terming it the "Island

of Flowers" and "the Garden of the Tropic." It presents, indeed, within the space of a mile in length and a quarter of a mile in breadth, a verdure and fertility equal to the finest spots of Egypt. This, in so savage a region, which elsewhere offers nothing but naked peaks and glittering sands, makes an extraordinary impression. The island contains also two temples of small comparative dimensions, but distinguished by their simplicity and elegance. These are considered by Jomard as only slender remains of the ancient power of Elephantine; but though that island appears once to have formed a separate kingdom, it could never, we think, have been powerful, situated, as it is, in a tract which for twenty miles in every direction is doomed by nature to perpetual barrenness.

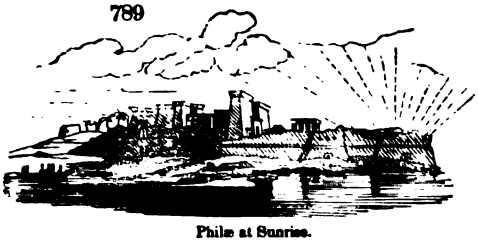
The cataracts of the Nile (*fig.* 788.), so celebrated in antiquity, commence about three miles above Elephantine. The picture drawn of them, however, as forming a prodigious fall, whose sound deafened the neighbouring inhabitants, and obliged them to remove their dwellings to a distance from the roar, has not been verified by modern observation. It does not appear that there is at present any considerable fall: and though some change might be possible, one so entire cannot be imagined. A most picturesque and extraordinary scene is, however, produced by the Nile dashing through a wild confusion of granite rocks, with which its bed, for several miles, is thickly studded. The two opposite chains, presenting peaks of every form and aspect, meet and cross in the middle of its course. The river, which above flows in silent majesty, upwards of a mile in breadth, is here narrowed to half that space; and its stream, forcing its way through these steep and innumerable islets situated above, amidst, and below the cataract, boiling, foaming, and breaking among a thousand rocks, presents a scene of the grandest effect. The water in the different channels is tossed about in every direction, forming numberless little cascades. The noise, resembling that of a tempestuous ocean, on a rocky shore, is in winter and spring very formidable, and heard at the distance of three miles.

788

Cataracts of the Nile.

The island of Philæ (*fig.* 789.), above the cataracts, and at the very gate of Ethiopia, constitutes still another striking feature. Within a space of a quarter of a mile in length, and half that breadth, it exhibits a confusion of grand and beautiful monuments, rivalling those left by the greatest cities of Egypt; and their elegant forms and white colour strikingly contrast with the embrowned tints and the wild and rugged peaks of the surrounding mountains. Denon distinguished eight different temples, built apparently at different periods, and quite separate, though some pains had been taken to combine together those which were contiguous. Philæ is far from presenting the smiling aspect of Elephantine; but a few dates and cultivated fields on the island itself and the opposite shores, placed as they are upon this burning soil, and amid this immensity of arid rocks, produce an agreeable impression, and soften somewhat the extreme severity of the site.

789



Philæ at Sunrise.

Having thus traced the Nile in its entire course through Egypt, we have gone over the main body of that country; but some wild appendages remain, which she claims as belonging to her. Among these is that peculiarly desolate tract, which extends from the Nile to the Red Sea, through the whole extent of Middle and Upper Egypt. No district of it appears to produce any thing which can afford food for man. The soil is sand, intermingled with rocks, through which, however, are interspersed trees and shrubs, affording pasture to the camels and sheep of the Ababdeh, a rude and independent race, who hold undisturbed possession of these wilds. At all times, however, a caravan route has been pursued across them to the Red Sea, for the purpose of carrying on that intercourse with Arabia and India, of which Berenice was anciently the great emporium, but whose much diminished amount is now chiefly carried on by Suez and Cairo. There is still a caravan from Keneh to Cosseir, for the supply of Upper Egypt. The journey is performed with camels in forty-two hours, and without any inconvenience but what arises from the necessity of carrying provisions, and from the scarcity of water; several of the few springs which occur being rendered useless by the saline and mineral impregnations. Cosseir is an assemblage of Arab huts composed of wood and mats, situated in a frightfully poor and barren country, and without any good water but what is brought from Asia. The sea, however, abounds with fish, and it displays some commercial activity, though containing no accumulations for trade, and having only one harbour capable of holding a limited number of inferior merchant-vessels.

Belzoni, by great exertions, found his way to the ancient Berenice. He could trace the main streets, and even the materials of the houses, consisting of corals, madrepores, and petrifactions, the copious products of those seas. Opposite to it is a very fine natural harbour, which has not, however, depth enough for large vessels, and whose entrance is at present obstructed by a bar of sand, easily removeable. There is a small Egyptian temple, built of sandstone. The extent of the ruins is 2000 feet by 1600, which might, it is supposed, have contained a population of 10,000. At present, it is entirely deserted.

About twenty miles inland from Berenice is the mountain of Zabara, famous for the emerald mines found in it by the ancients. When Belzoni passed, fifty men had been employed for six months by a speculator from Egypt, to open again this long-lost source of wealth. They had found, however, only a few specimens, mostly of inferior quality. Further northward, towards the western quarter, are said to be still two large monasteries, those of St. Anthony and St. Paul, whose gardens and plantations somewhat enliven the aspect of this desert.

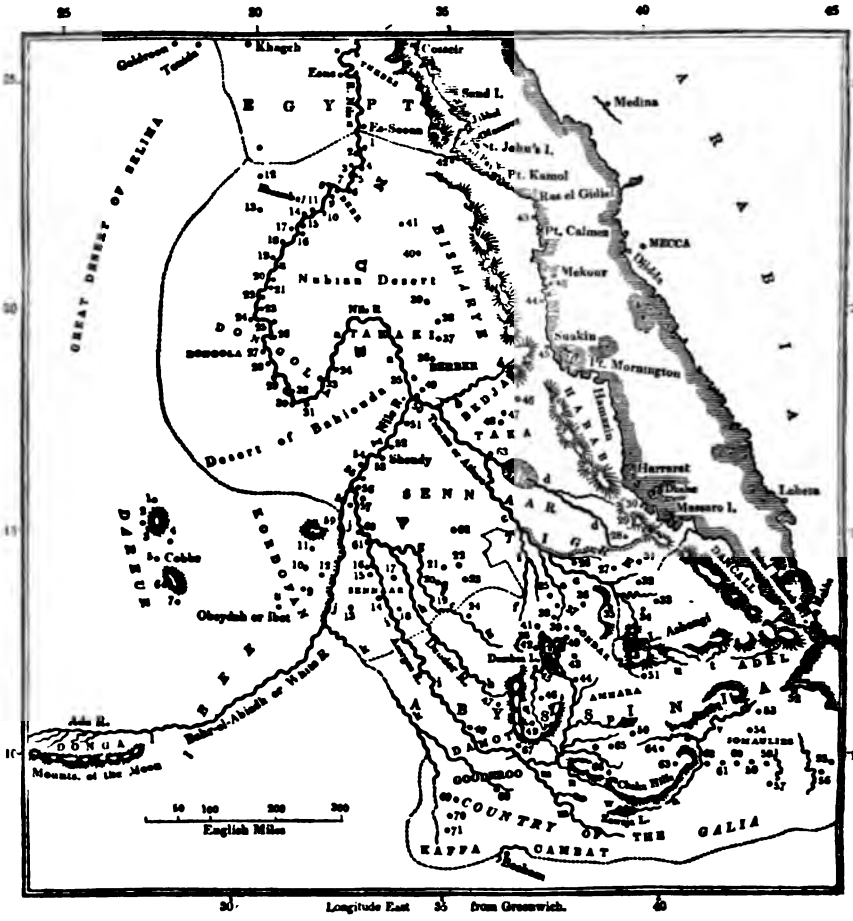
At the head of the Red Sea is Suez, by which Egypt carries on nearly all that remains of its once immense trade in that sea. This trade is now insufficient to give any degree of wealth and importance to Suez. It is a poor, ill-built town, which derives all its provisions from Cairo, and has to send several miles for water, and even that is bad. Almost its only intercourse is with Jidda, from which it receives coffee, and supplies it with grain for Mecca. A few vessels also come from Yemen. Those of any considerable burden are obliged to lie in the road, as only small boats can enter the harbour of Suez itself.

The canal which anciently united the Red Sea and the Mediterranean was traced by the French engineers, who, after considerable search, conceived that they had ascertained its whole line. It extended across part of the isthmus of Suez, and by Belbeis, into the Pelusiac branch of the Nile. Although the work appears to have been continued successively by the native princes, the Greeks, and the Romans, there is no record that the canal was ever actually used, unless in the seventh and eighth centuries, under the Saracenic princes; and then probably only on a small scale. It is conceived quite possible to renew the work; though the necessary dependence on the rise of the Nile, and on the variable winds of the Arabian Gulf, renders it difficult to secure a regular navigation.

The region to the west of Egypt consists of an equally dreary and still more unvaried plain, or rather ocean of sand. Interspersed in it, however, are oases, or cultivated islands, of considerable extent. The principal is the one called El Wah, or the great Oasis. It must be of tolerable magnitude, since Browne was eight hours in travelling from Ain Diseh, the first spring, to Khargeh, the capital. Poncet describes it as a delightful spot; but it may have derived additional charms from contrast with the dreary wilderness around. The governors of Upper Egypt keep a garrison here, and consider it of importance, as affording to the caravans that proceed to the south, an opportunity of renewing their supply of provisions and water. Khargeh, the capital, contains about 2000 inhabitants, who subsist on rice and dates. The continual blowing of the sand is provided against by the singular precaution of a flooring formed above the streets, which renders them almost like a dark chamber. Near this place is a truly magnificent temple, 191 feet in length, and containing, in high perfection, all the ornaments peculiar to those of the Thebaid. On the outer gate is a very long Greek inscription. In the vicinity of other villages are considerable temples, where, though the character of the architecture be Egyptian, arched roofs and Greek inscriptions mark that additions, at least, have been made by a different people.

About one hundred miles to the west of El Khargeh, Sir Archibald Edmondstone and M. Drovetti lately discovered another Oasis, consisting of twelve villages, of which the principal, called El Cazar, is beautifully situated at the foot of a line of rocky hills, and surrounded by fine gardens of palm, acacia, and fruit-trees. Near it are vestiges of a very large town; and ruins of similar character with those of El Khargeh, though on a smaller scale, are scattered throughout the Oasis.

The little Oasis, called likewise that of El Cazar, or Kasr, not being in the route of any caravan, remained almost unknown, till Belzoni lately made his way thither. It consists of a plain, fourteen miles long and eight broad, formerly cultivated throughout, but now only in parts. The people are a rude, independent race, who once had sheiks of their own: they hold little intercourse with any other tribe. Belzoni found here the remains of a large temple, with a number of tombs cut in the rock, in the Egyptian style. From these, and from a spring, varying somewhat in temperature, but not actually in the manner described by Herodotus, he conceives that on this oasis may have been situated the celebrated temple of Jupiter Ammon, at least that it may enter into competition with Siwah for that distinction.



References to the Map of Nubia and Abyssinia.

NORTH PART.

1. Darmoot
2. Marowan
3. Dakki
4. Kobban
5. Bareda
6. Koroske
7. Derr
8. Ayfe
9. Ibrim
10. Ermenne
11. Ibsambul
12. Mour
13. Belime
14. Farss
15. Serra
16. Sukkot
17. Argeyn
18. Mershed
19. Samne
20. Kolbe
21. Ferte
22. Ebar
23. Koeyk
24. Soleb
25. Tmareh
26. Argo
27. Dongola
28. Kait
29. Handech
30. Dabdi
31. Abdouro
32. Old Dongola
33. Merawe
34. El Bellal
35. Hasse
36. Hawita
37. Amour, or Hamer
38. H. Halboub
39. Dimokea
40. Chigre
41. Terlowi
42. Port Habesh (Berenice)
43. Aldhab
44. Salaka
45. Suakin
46. Arewad Pond
47. Wady Ody
48. Wady Lado
49. Goos
50. Acoa
51. Eliab
52. El Hasa
53. Shendy
54. Derrier
55. Suakim

SOUTH PART.

56. Halfaa
57. Halfoon
58. Gidid
59. Gimmoe
60. Kamilee
61. Herbegi
62. Mandera
63. Allilik.

1. Medwa
2. Zeghawa
3. Haime
4. Sweini
5. Cobbe
6. Badoo
7. Ril
8. Obeydah, or Ibet
9. Bisherie
10. Abu Hadid
11. Haraasa
12. Shegezik
13. Walia
14. Sennaar
15. Usheta
16. Ismirt
17. Nuba
18. Barrea
19. Gimira
20. Byla
21. Teawa
22. Imgedalib
23. Rashid
24. Abotkra
25. Sancala
26. Shire
27. Arusa
28. Abba
29. Dixan
30. Arkeeko
31. Adowa
32. Genater
33. Dirbah
34. Antalo
35. Nimbuka
36. Tamano
37. Tcherkin
38. Deber
39. Gondar
40. Emfras
41. Teukel
42. Dingleber
43. Lobec
44. Alata
45. Limjoar
46. Abo
47. Binamo
48. Mine
49. Bure
50. Azzel
51. Ain Tacazze
52. Zeyla
53. Haoussa
54. Hubeta
55. Dedowale
56. Dando
57. Fadeiha
58. Harrjar
59. Kersha
60. Boorha
61. Damta
62. Anfbu
63. Atukober
64. Gezeree
65. Mecan
66. Tegulet
67. H. Amba
68. Geoderoo
69. Killah
70. Angaree
71. Gonee.

Rivers and Lakes.

a Nile, R.
b Marab, R. of Bruce
c Athara, or Tacazze, R.
d Mareb, R.
e Angrab, R.
f Guangwa, R.
g Rahad, R.
h Dender, R.
i Azrek, or Blue River
j Abiad, or White River
k Ankot, R.
l Ada, R.
m Beloo, R.
n Reuna, R.
o Tzana, R.
p Gasben, R.
q Nile, R. of Bruce
r Dembea Lake
s Ashangi, Lake
t Hanazo, R.
u Molee, R.
v Hawash, R.
w Zawaja Lake

CHAPTER III.

NUBIA.

Sect. I.—*General Outline and Aspect.*

In the beginning of the chapter upon Egypt, a general idea has already been given of Nubia. Like that country, it owes its exemption from the character of complete desert entirely to the Nile, which holds through it a course of nearly 1000 miles in direct distance, without including its long bend round Dongola. That great river, however, diffuses its waters to Nubia in much more scanty portions. Being everywhere hemmed in by high banks and rocks, it cannot, even with some artificial aid, be made to inundate in general more than a mile in breadth upon one side. The country forms, therefore, a narrow belt of immense length, through the endless desert, stretching eastward to the Nile, and to the westward lost in the wide and unknown wastes of interior Africa.

As Nubia, in consequence of this structure, is divided, both physically and politically, into a number of small states almost entirely detached from each other, our general view will be short, and the most interesting details will be reserved for the local survey.

Sect. II.—*Natural Geography.*

Subsect. 1.—*Geology.*

Travellers mention granite, syenite, porphyry, marble, sandstone, and limestone, among the mineral formations of Nubia; but no account has hitherto been published of its geognosy. Its mines of gold were formerly celebrated.

Subsect. 2.—*Botany.*

The Botany of Nubia has already been considered along with that of Egypt. (p. 537.)

Subsect. 3.—*Zoology.*

Our acquaintance with the Zoology of Nubia is almost exclusively derived from the very recent discoveries of M. Rüppell; whose work, indeed, on the animals of Northern Africa, has scarcely yet, we believe, been brought to a conclusion.

The following quadrupeds, besides those equally found in the northern regions of Africa, seem more particularly appropriated to Nubia:—

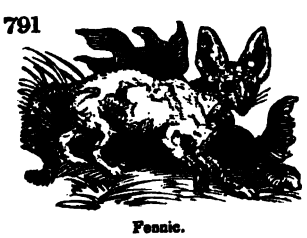
Lepus sabellinus Rüp. Fawn-coloured Hare.
Mus dimidiatus Rüp. Nubian Mouse.
Canis variegatus Rüp. Variegated Fox-dog.
Canis Anthus Rüp. Nubian Wolf.
Canis famelicus Rüp. Kordofan Fox.
Canis pallidus Rüp. Pale Fox.
Felis maniculata Rüp. Nubian or True Cat.
Hyæna venatica Burchell. Painted Hyæna.
Oryx Tao Sw. Nubian Oryx Antelope.
Oryx Addax. Addax Antelope.
Antilope Saltiana Rüp. Salt's Antelope.
Antilope montana Rüp. Mountain Antelope.
Gazella Dama Pall. Swift Antelope.
Phacochœrus æliana. Masked Boar.
Gazella Cora. Cora Gazelle.

Several of these deserve a slight notice. Wild Dogs and Foxes appear to be numerous; as M. Rüppell has discovered no less than four new species. The Variegated Fox-dog is ochre-coloured, the fur thick, and variegated with blackish: it was discovered both in Nubia and Upper Egypt, where it lives in the deserts, but does not burrow.

The Nubian Dog, or more properly Wolf, is light gray, marked with a few black spots on the back, while the tail is entirely black. It may be regarded as the wolf of Egypt as well as of Nubia, where it nevertheless appears to be rare. A third species, the Kordofan Fox, principally occurs in the deserts bearing that name, and in those of Nubia: it is nearly related to the Fennic, which it resembles in its burrowing habits, and is probably the fox-like animal represented on the monuments of Egypt; for the true jackal (*Canis aureus* L.) does not appear to exist either there, or in the immediately adjoining countries. Lastly, the Pale Fox (*C. pallidus*) is entirely of a light yellowish gray, with a bushy tail tipped with black; it is only found in the provinces of Kordofan and Darfour.

That grotesque and rare animal, the Fennic, (*Canis Zerba*) (*fig.* 791.), first described by Bruce as inhabiting Abyssinia, was also discovered by M. Rüppell in the neighbourhood of Ambukol, and in the desert of of Korti, where they live in holes, dug by themselves, and not on trees, as has been asserted by Bruce.

791



Fennic.

Respecting the Unicorn, M. Rüppell's researches have furnished us with some very singular information; while his observations on the structure of the horns of the Giraffe prove at least that the existence of a quadruped like the supposed Unicorn, furnished only with a frontal horn, is at least neither impossible nor contrary to nature. Our traveller obtained some information on this much debated subject in Kordofan, where the Unicorn was said to be known, and to bear the name of Nillekma. Persons of various conditions agreed in the statement that the Nillekma was of a reddish colour, equal in size to a small horse, slender

as the gazelle in its shape, and furnished with a long, slender, straight horn in the male, which was wanting in the female. Some added, that its hoofs were divided, while others declared they were entire. According to these statements, this animal inhabits the deserts to the south of Kordofan, is uncommonly fleet, and only occasionally visits the Kaldagi Slave Mountain on the borders of this province. Three several Arabs asserted to M. Rüppell that they had themselves seen the animal in question: and one of his slaves from Kaldagi, on seeing the antelopes brought from the desert of Korti, gave, of his own free motion, a description of the Nillekma, exactly coinciding with the notices afterwards obtained by the traveller: it appears he had eaten of it in his own country, and described it as a very beautiful animal. Of the veracity of this slave M. Rüppell had frequent proofs, especially in the descriptions of animals, all of which were found to accord with the respective species which were subsequently procured. (*Zool. Journ.* vol. xv. p. 390.)

The most beautiful Antelopes of Nubia are those named the Mountain, the Addax or White, and the Dama or Swift Antelope. The first inhabits the neighbourhood of Fazogl on the White Nile. The elegant White Antelope (*A. Addax*) is very rare, being found only in certain parts of the desert to the south of Ambukol, where it lives in small herds: it is so exceedingly fleet, that even the best Arabian horses have much difficulty in keeping pace with it. The Dama, from the great length of its legs, would seem to possess the same celerity of motion.

The northern Giraffe, or Camelopardalis of the ancients (*C. antiquorum* Sw.) (*fig.* 792.), has been seen by M. Rüppell in small herds in all the desert steppes south of Simrie, is plentiful at Darfour, and is even found to the east of the Bahr el Azrek. There can be no doubt that this is a distinct species from the Giraffe of Southern Africa (*C. australis* Sw.).

Several interesting birds appear to be peculiar to this kingdom, or, at least, not hitherto known as inhabitants of Northern Africa.

Northern Giraffe.

Occipital Vulture.

Nubian Bustard.

Among those most deserving notice should be mentioned the Occipital Vulture (*fig.* 793.), first discovered by Mr. Burchell in the southern regions of Africa. It is a large and imposing bird, having the upper plumage brown, the head and under parts white, and one-half of the bill red: it inhabits the borders both of Nubia and Abyssinia, and is found either solitary or in pairs. The Red-throated Shrike (*Malaconotus erythrogaster* Sw.) is a new species, not very unlike the Barbary Shrike. M. Rüppell describes, under the erroneous generic name of Ixos, several curious birds belonging to the family of Great-legged Thrushes (*Crateropodinæ* Sw.). The Otis Nuba, or Nubian Bustard (*fig.* 794.), is likewise a new acquisition; and seems peculiar to the deserts of tropical Africa. By the discovery of a new Parrot (*P. Meyeri* Rüpp.) in Kordofan, M. Rüppell has ascertained the most northern range of this family in the Old World. We could dwell much longer on the important discoveries of this enterprising traveller and able naturalist, did our limits permit. We must, therefore, merely add, that his researches have been extended to every department of the animal kingdom, and have made a very important addition to our knowledge of geographic zoology.

The feathered game is not deficient in these arid wastes. Besides the Nubian Bustard already noticed, another of the same genus, the Otis Arabs of Linnæus, is found in Kordofan: it is of considerable size, and distinguished by a pointed black crest. Partridges and quails are mentioned by former travellers: among the first is a new species discovered by Messrs. Denham and Clapperton, and justly named to commemorate the latter.

Sect. III.—*Historical Geography.*

Ethiopia is one of the most venerable names of antiquity. In a vague and indeterminate sense, it comprehended the whole of interior Africa south of Egypt and Mauritania; but it was applied in a peculiar sense to *Ethiopia sub Ægypto*,—the region of the Upper Nile. This Ethiopia appears to have been a much more powerful and civilised kingdom in the early ages of history, than at any subsequent period. Egypt was repeatedly conquered from this quarter; and, according to some, she derived from Ethiopia the original of those arts and institutions which have rendered her name so celebrated. There certainly was an interchange between the two countries; but we should rather suppose Egypt, more fertile, and possessing much greater natural advantages, to have been the parent. Ethiopia, however, attests its ancient grandeur by monuments, excavated from lofty rocks which overhang the Nile, and which, though they do not display such exquisite skill, are nearly as magnificent as those of Egypt, and in some respects more striking.

Ethiopia did not, like Egypt, sink under the ascendency of the great empires. The disastrous repulse of Cambyses forms a memorable event in ancient history. It does not appear that, beyond some occasional inroads, the Romans did more than maintain a frontier legion at Elephantine, which checked incursions, and exacted some imperfect homage and tribute from the chiefs immediately above. The Saracens and Turks never did more. Even for some centuries after the former enjoyed possession of Egypt, Nubia continued Christian; though it has since, by some unknown agency, become Mahometan. This rough independence, however, has been perhaps a misfortune to Nubia, since it has prevented her from receiving any of the improvements introduced by the great conquering nations. Split into a number of insignificant states, she has lost all her early civilisation, and her population was abandoned, either to lawless independence, or to the brutal tyranny of arbitrary chiefs. The late conquest by the army of Mohammed Ali was too violent, and attended with too much of outrage and rapine, to be attended with beneficial effects; and it appears to have been in a great measure ephemeral.

Sect. IV.—*Political Geography.*

Nubia exhibits no semblance of a well-organised government. Every town or large village, with its adjoining territory, has its mek, or melek, who exercises to the utmost whatever power he may possess, which, according to circumstances or character, is sometimes almost absolute, at other times is held in contempt. Each individual is armed with a crooked knife, which he is ever ready to employ in deeds of violence. From the various character and detached position of these states, their details will be best treated under the local survey.

Sect. V.—*Productive Industry.*

The range of cultivation in Nubia is extremely limited. That irrigation derived from the Nile, on which it entirely depends, is obtained almost solely by sakies, or wheels for raising the water to the level of the high banks. Of these, within the space of 150 miles, which intervenes between the first and second cataract, there are from 600 to 700. The dhourra, noticed as the produce of the more arid Egyptian soils, is almost the only grain of Nubia; though sometimes the people raise an after-crop of barley or lentils. Tobacco also, a luxury in universal demand, is cultivated with success. Sheep are fed on the tracts unfit for grain, but are by no means very numerous. Camels are numerous in the trading towns; but horses are only maintained by the chiefs, and for military purposes. The Nubians have scarcely any manufacture which can be termed national. The women make coarse woollen and cotton cloths, mats of date canes, and the necessary implements for cooking.

The commercial intercourse of Nubia is less limited. Being the only practicable line through the desert, it forms the medium of communication for Arabia and Egypt with the vast regions of central Africa. Cotton goods, toys, arms, and a variety of trifling articles, are carried to be exchanged for gold and ivory, but chiefly for slaves. These are purchased from Darfour or Kordofan, where they are obtained by war, or by mere slave-hunting, from the still more savage countries in their vicinity. This is almost entirely a transit trade; for though a considerable number are kept by the great in Dongola, Merawe, Sennaar, &c., by much the larger proportion is sent across the deserts to Egypt, or by Suakim to Arabia. The chief seats of this traffic are Mahass, Dongola, and particularly Shendi, in which last Burckhardt supposes that 5000 slaves are annually exposed for sale. The slaves from eleven to fourteen or fifteen years of age are the most valued, and bring fifteen or sixteen dollars. Above that age, they are considered intractable, and rarely sell for more than eight or ten. The good treatment of the slaves is limited to that which mere self-interest imperiously dictates. The necessary supply of food, and whatever is absolutely essential to health, are regularly furnished. In the early part of the journey, while these unfortunate victims are yet near their native country, they are treated with kindness and indulgence, though narrowly watched; but when they are once beyond the Nile, more severe measures are resorted to,

without hesitation. It is a common saying, with regard to a refractory slave, "Let him pass the Berber, and the whip shall teach him obedience." The more violent are secured by long poles fastened behind with cords; and at night they are put in irons. The final destiny, however, of these unhappy persons is by no means so severe as that of those employed to till the ground in the European settlements.

SECT. VI.—*Civil and Social State.*

The inhabitants of this extensive line of territory consist of two leading races. The first is the proper Nubian, called Berbers or Barabras; a class strictly native, and of the same race with those who inhabit the mountainous districts of Barbary. Some tracts beyond the kingdom of Sennaar, are inhabited by negroes; but Arabian tribes are more extensively diffused in this region.

The Nubians are in a very rude state, and are scarcely acquainted with any of the arts and improvements of civilised society. Many of them, even a little above Egypt, were found by Belzoni absolutely ignorant of the use of money. Like savages, they prized looking-glasses and shining toys more highly than articles of real value. Their food consists of dhourra, ground between two stones, and baked into cakes without leaven, over which they pour onion sauce, broth, or milk. They make from it bouza, a species of beer, in which they indulge to excess. Their houses are roughly built either of mud or loose stones: in the former case, they are roofed with leaves of the date tree. A cap of cloth or linen, and a woollen mantle or cotton shirt, form all the attire which is considered necessary; and, in many cases, even this is thought superfluous.

The Nubians are generally a handsome race, well made, strong, and muscular. The countenances as well as the demeanour of the females are sweet and pleasing, and they are said to be strictly observant of their matrimonial engagements. In the small and secluded villages, the inhabitants of which are employed in agriculture, a primitive simplicity of manners appears to prevail, and a number who go to act as porters in the cities of Egypt are considered remarkably honest. In the large trading towns, which are chiefly inhabited by slave merchants, the utmost profligacy of manners prevails.

SECT. VII.—*Local Geography.*

There are no data for exhibiting the divisions of Nubia in any precise or definite form. Beginning, however, with the frontier of Egypt, and proceeding up the Nile, we shall obtain a rapid view of its varied objects.

In that close valley to which we now ascend, the natural features, though striking, are uniform and monotonous. The Nile flows between rocks, which either overhang its stream, or leave room only for little patches of cultivation; and the modern inhabitants are poor and rude. The banks, however, as in Egypt, are diversified at short intervals with ancient monuments of a grand and striking character. Instead of being composed of masonry, they are in many and the most remarkable instances, cut out of the solid rock. After passing a small temple at Debod, and a number of singular ruined enclosures at El Umbarakat and Sardab, we arrive at Kalabshe, the first Nubian temple on a great scale. The propylon is 120 feet long, and 50 feet high; but the portico is entirely wanting, and its destruction seems to have been effected by violence, as the remaining parts are in good preservation, particularly the colours. A golden lamp, evidently Grecian, was lately found among the ruins. At the distance of a quarter of a mile is a small temple, with the ruins of a considerable town, about a mile in length, supposed by Burckhardt to be the ancient Talmis.

After passing Garba Dendour, we come to Gyrshe, or Guerfeh Hassan, which presents the first specimen of the excavated temples of Ethiopia. The greater part of it has been hewn out of a perpendicular rock. The entrance is adorned not only with large columns, but with three colossal statues, eighteen feet high, the workmanship of which appeared to Belzoni to display the mere infancy of the art. The figures were such as barely to indicate that men were meant to be represented, and their faces were a caricature of that of the negro. About nine miles above is Dakki, a much more elegant structure, situated in a plain, which appears once to have been cultivated, but which is now covered with sand. There are smaller edifices at Offelina and Leboua, but nothing of much importance occurs till we reach Dehr, or Derr, reckoned the capital of Lower Nubia, about 130 miles above Syene. It possesses little either of extent or elegance. The houses, which, with the exception of a few belonging to the chiefs, rarely exceed eight or ten feet in height, are built of mud and stones intermingled. There is an excavated temple, but not of much importance. A few miles above is Ibrim, strikingly situated on an almost perpendicular rock which overhangs the Nile, and considered a strong military post against the Arabs. The Mamelukes occupied Ibrim on their retreat from Egypt, but on being obliged to leave it, they entirely destroyed the place, which has remained ever since uninhabited. The date plantations round it are considerable.

The country above presents little of interest; rude villages, date plantations on the eastern bank, total barrenness on the western. About fifty miles above Derr appears the grand-

est monument of Nubia, Ibsambul, whose excavated chambers rival the proudest boasts of Thebes and Tentyra. This temple (*fig.* 795.) is cut out of a solid rock, rising perpendicularly about 600 feet from the Nile. The entrance, however, when first visited by Burckhardt, was choked up with such immense masses of sand, that all idea of penetrating seemed out of the question. Belzoni, by almost unexampled exertion and perseverance, succeeded in clearing away the obstacles, and found the interior (*fig.* 796.) truly magnificent. The

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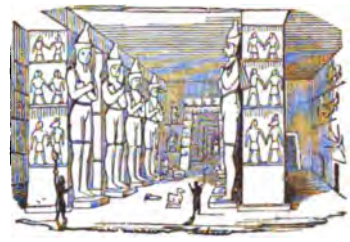
Rock Temple at Ibsambul.

796



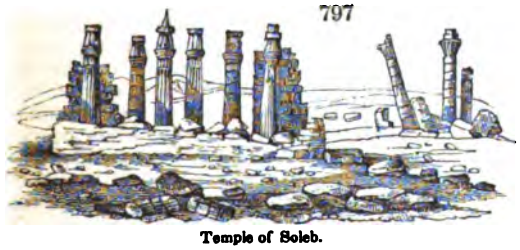
Interior of Temple at Ibsambul.

pronaos, 57 feet long and 52 feet wide, is supported by two rows of square pillars, each pillar being adorned with a figure elegantly executed. Hieroglyphics, painted sculptures, colossal statues, and all the ornaments which characterise Egyptian temples, are profusely employed. Battles, storming of castles, triumphs, particularly over the Ethiopians, with captive groups of that race, are the subjects chiefly represented. The exterior of the temple is 117 feet wide, and 86 feet high; but the most remarkable feature consists of four colossi, which, with the exception of the Sphynx, are the largest sculptured figures in Egypt or Nubia. Burckhardt, who saw only the shoulder of one of them above the sand, conjectured, from its dimensions, that the whole would be 65 or 70 feet. Belzoni, after removing the sand, found it 51 feet, not including the cap, which was 14 feet. Of these colossi, one is still buried, and another thrown down.

With Ibsambul terminate the ancient monuments belonging to that part of Nubia which borders on Egypt. Above, at the distance of a day's sail and a half, is Eshke, the residence of a cacheff, and situated on a larger extent of wooded and cultivated land than intervenes between it and Syene. Another day's sail leads to Wady Halfa, the second cataract. Here, too, Europeans have been disappointed of finding a mighty waterfall. This cataract, like the first, is formed by several thousand rocky islands, through which the Nile dashes amid clouds of foam, and is whirled and tossed in perpetual eddies. The rocks consist, not of granite, but of a species of black marble; and the islets, being covered with patches of verdure, and several even inhabited, produce a picturesque effect, and relieve that aspect of extreme desolation, which characterises the scenery of the first cataract.

The territory of Mahass may be described in a manner nearly similar; and the rude and violent character of its chief obliged Burckhardt here to terminate his career of Nubian discovery. Majestic ruins however continue to be scattered along the bank, among which, pre-eminent beauty is displayed by the temple of Soleb (*fig.* 797.). The remains consist only of a range of solitary columns, but these are of such peculiar lightness and elegance, that they may come into competition with any of those which adorn the banks of the Nile.

797



Temple of Soleb.

Wady el Hadjar and Sukkot are rude and sterile territories, in which the range of culture scarcely extends beyond the immediate banks of the Nile, and the poor villages, when not under the dominion of Egypt, are ruled over and oppressed by a succession of turbulent little chieftains. They contain, however, the temples of Semneh and Amarah, the remains of which possess considerable beauty.

From Dar Mahass the traveller enters the territory of Dongola. The vicinity of the river continues to present the aspect of a narrow belt of cultivated land, rescued from the surrounding desolation; but this belt, hitherto on the eastern, is now on the western bank. Dongola, besides, presents tracts of more brilliant fertility and beauty than any part of Lower Nubia. High granite rocks enclose the green and cultivated valley of Jarjar, which flourishes in freshness and fertility in the bosom of the wildest waste. Immediately beyond is a pass called the Water's Mouth, which is represented as exhibiting a scene of grandeur and wildness, superior to those at the first and second cataracts. It is formed by a succession

of huge and detached masses of naked rock, and of large fragments scattered on the plain. Below is the large island of Argo, a spot of peculiar and striking fertility, forming, in the bosom of the desert, the most luxuriant natural garden. The air is full of fragrance, and the palm-trees are rendered melodious by the song of numberless birds, among whose notes that of the dove is predominant. A narrow mound separates this fairy-land from the regions of barrenness and death, and this display of nature's bounties singularly contrasts with the wide surrounding expanse of sandy desert. In one part of it are found two colossal statues, lying on the ground, 23 feet in length, and the sculpture of which displays considerable skill, especially when it is considered that the materials are peculiarly hard.

About ten miles above Argo is Maragga, or New Dongola. This last name was given to it by the Mamelukes, who, during their temporary occupation of this country, made it their capital. They converted it, though built only of mud, into a very neat town, with several large courts or squares. The surrounding country, naturally the richest in the whole territory, was greatly improved by them. Old Dongola, which appears at no time to have answered to its ancient reputation, is now a miserable mass of ruin. The sand, which, when Poncet was there, had already made large encroachments, has now buried the centre of the town, and divided it into two separate parts.

The Nile, in the tract which we now approach, no longer flows in that straight direction from north to south, which marks almost the whole of its known course. Soon after receiving the Tacazze, it makes a great bend, and for about 200 miles flows southward, contrary and parallel to its former course. It then bends again, and renews its usual northerly course, which it maintains through Dongola and Nubia. It thus forms three parallel channels, enclosing two peninsulas, which contain a greater extent of cultivated land, and support a larger population, than any part of Lower Nubia. The middle channel, or that which flows southward, parallel to the Dongola branch, is occupied by the Sheygya, an Arabic race, peculiarly roving, fearless, and warlike. They have numerous slaves, whom they employ in tilling the ground, and in performing all laborious offices, while they devote themselves entirely to arms. They make battle a scene of gaiety, rush laughing into the field, and address their enemy with the Eastern salutation, "Peace be with you." Disdaining the improved instruments of modern warfare, they have obstinately adhered to their ancient arms, the lance and the shield. Even with these, they fought a most obstinate battle at Korti with the troops of the Pacha of Egypt. It ended, however, in their entire discomfiture; after which they put to death their necromancers, who had deluded them with predictions of victory, and submitted to the invader. Rumour, however, since states, that they have risen in the rear of the Pacha's troops; and it does not, indeed, seem very probable that a race thus fierce and restless, inhabiting so distant and inaccessible a tract, should remain in quiet subjection to Egypt.

Merawe, according to Cailliaud the ancient Napata, capital of the Sheygya, is situated on the Nile. The modern town is large, being supposed to contain about 10,000 souls; but the houses are built of mud, and the streets are long and gloomy. In its vicinity, however, is situated a range of the grandest monuments which Ethiopia can boast. A lofty eminence, called Djebel el Berkel, or the Holy Mountain, presents, partly cut out of its rocks, partly built along its sides, seven or eight temples, the largest of which may rival the most magnificent monuments of Egypt. It is 450 feet long, by 150 wide, and the principal interior chamber is 147 feet by 111. Sculptures and hieroglyphics, of a religious import, cover the walls in equal profusion as in Egypt. The symbols of Jupiter Ammon, that primary object of Ethiopian worship, hold of course the foremost place. These works appear to great disadvantage, since they consist, not of the solid and durable materials which compose the Egyptian monuments, but of a friable sandstone, the surface of which has, in a great measure, wasted away. Considerable skill seems to be displayed in some of the workmanship; though other parts of it are inferior. Near these temples are seventeen pyramids, of no remarkable dimensions; but at El Bellal, on the opposite side of the river, at the distance of seven miles, there is a very magnificent range, though still decidedly inferior to the Egyptian structures. The largest (*fig.* 798.) stands on a base 152 feet square; and, though diminished in height by the fall of a great part, still rises to 103 feet. One very curious feature is presented by the existence, within its interior, of another pyramid, of a different age and style of architecture, but much more entire than that in which it is enclosed.

Pyramid at El Bellal.

Beyond the head of the branch, the Nile is joined by its great tributary the Tacazze, which has flowed through Abyssinia. A Berber population again appears; and the name of Berber is even given to a succession of four large villages situated along the river. The inhabitants are a very fine race, as to bodily qualities; they are somewhat taller, and much stronger, than the Egyptians. Though their colour is nearly as black as that of the negro, they have very different features; indeed, they are handsome, both in face and person. Their moral character, however, as drawn by Burckhardt, appears under the most unfavourable colours. Consisting of slave-traders, or having continual intercourse with that class of men, they contract all the irregular habits which their mode of life tends to generate. Among their bad qualities, treachery and avidity predominate; and in the pursuit of gain, they trample upon every ordinance, human and divine. The mek's authority is little regarded among the wealthier inhabitants, who carry on perpetual private quarrels, and terminate every dispute by the law of the strongest. They are also addicted to intoxication and every species of debauchery. Farther up the Nile is Shendi, or Chendi, a town still subject to the Arabs, which Mr. Bruce found in a state of decay, and not containing above 250 mud houses: but, when Burckhardt visited it, a protecting government had again rendered it the emporium of the trade with central Africa; particularly that in slaves, of whom about 5000 are supposed to be sold in the markets of Shendi. Near this place is a range of monuments, the existence of which was reported to Bruce, and which were lately visited and examined by M. Cailliaud. They consist of forty pyramids, and a temple, of which few traces remain, but which seems to have been about 280 feet in length. The largest pyramid is 97 feet high. They appeared to M. Cailliaud more ancient than the monuments of Egypt, and of the same character. Jomard and Cailliaud supposed them to be the remains of the ancient Meroe; and the most judicious scholars have coincided in this opinion.

Soon after leaving Shendi, the territory of Sennaar begins; but the banks of the Nile are still sandy and barren, diversified only by occasional woods and cultivation. About fifty miles above is Gerri, a large village, and near it is a ferry across the Nile, joining the road which leads through the desert to Dongola. Soon after, another grand feature occurs; the junction of the Bahr el Abiad or White River, coming from the west and from central Africa, and of the Azrek, or Blue River, coming from Abyssinia; which two great streams uniting form the Nile. The controversy which is the Nile, seems now universally decided in favour of the Bahr el Abiad, which is described by Bruce himself as the largest of the two. Halfaia, a large, handsome, pleasant town, is situated near the junction. The tropical rains here begin to be felt, and relieve the territory from that general barrenness, and dependence upon inundation, which characterise Egypt and Nubia.

In ascending the Blue River we pass Herbagi and Gidid, two considerable villages; then, about a hundred miles above the junction, we come to Sennaar. This is the most important and populous kingdom throughout all that tract which bears the name of Nubia. Its fertility, however, is not maintained by inundation, but by the tropical rains, which are here considerable, though not so violent as in regions more immediately under the equator. Through their influence, the country in August and September assumes a verdant and delightful aspect, and a number of lakes are formed. On the cessation of the rains, the dhourra ripens, and the country acquires a yellow appearance. Soon afterwards, the lakes dry up, the country becomes parched, "all the beauty disappears, and bare scorched Nubia returns, with all its terrors of poisonous winds and moving sands, glowing and ventilated with sultry blasts." The horses of Sennaar are fine, and the horned cattle are represented by Mr. Bruce as the largest and finest in the world: but there is something, either in the air, or in the rank vegetation, which renders it impossible for animals to be bred, or even to live in it the whole year round; and they require to be removed frequently to the dry grounds, three or four miles from the river. The present native government of Sennaar was formed in 1504, by the conquest of the Shilluks, a race of negroes inhabiting the banks of the Bahr el Abiad. It has been, in theory, entirely despotic; the inhabitants assuming, even as a boast, the title of slaves; but, even in Bruce's time, the military officers had usurped the whole actual power, and left to the king little more than the name. The troops amounted to 14,000, consisting chiefly of a race of negroes, called Nuba, occupying the country between Sennaar and Abyssinia. The infantry were bad; but the cavalry, amounting to 1800, were equal to any in the world. This country was lately occupied by the army of the Pacha of Egypt, who entered Sennaar with little or no opposition; but the general insurrection since raised in their rear has probably restored the native power to complete independence. The city of Sennaar has been supposed to contain 100,000 inhabitants; but, according to Cailliaud, they do not exceed 9000. The houses are built of clay with flat roofs, and, except those of the great officers, are small, and do not consist of more than one story. The palace is four stories high, built of burnt brick, but in a ruinous state. Although Sennaar produces abundantly dhourra, millet, rice, and even wheat, it yields few commodities fitted for trade. The only intercourse consists in the transit trade from interior Africa to Egypt and Arabia. The gold dust, brought in quills from Kordofan and Fazuclo, has the reputation of being the finest and best in Africa. The returns consist chiefly in blue cotton cloth from Surat, which, made

into a species of long robe or shirt, forms the universal dress of the country. Spices, hardware, toys, particularly a species of Venetian black beads, are also in demand.

To the south of Sennaar is Fazuclo, or Fazoglo, a hilly territory, forming a province of the former country, though still governed by its own prince. Beyond it extends a vast range of mountainous districts, called Dyre, and Tegala, or Taggula. It is nearly independent; but the wild inhabitants are hunted and carried off as slaves to Sennaar, where, however, they are well treated, and employed even as troops, to keep in subjection the Arab inhabitants. The gold mines are found chiefly in a district called Quamaml; but, when the Egyptian expedition had reached it, by great efforts and sacrifices, they found them very poor, the ore being extracted in small quantities, and with great labour, from sand and earth. To the west, along the Bahr el Abiad, dwell the Shilluk negroes, who, as already mentioned, conquered Sennaar in 1504, and now assume the title of Funje, or lords. El Aicè, or Alais, their capital, seems merely to consist of a tract of country, formed into islands by branches of the Bahr el Abiad, and densely peopled. They employ themselves much in fishing, and have many boats, in which they sailed upon Sennaar, and effected their conquest. The country between the two rivers which form the Nile, and which for some space run nearly parallel to each other, is in general an extensive plain, covered with large woods, but diversified by one or two ranges of mountains.

The deserts to the east and west of Nubia next claim our notice. The Nile, particularly between Berber and Dongola, has a winding course, the following of which would render the commercial route to Egypt very circuitous. The caravans, therefore, with that enterprising courage which characterises the inland trade of Africa, have struck a route across tracts where, for many hundred miles, no human habitation is to be seen, and only a few bands of predatory Arabs procure for their flocks a scanty herbage. The eastern route from Berber to Syene, forming a line of about 500 miles, has been travelled by Bruce and by Burckhardt, and by both without meeting a human being. It does not present, however, unvaried plains of sand, like those which constitute the western deserts of Africa. It contains mountains, some 1000 feet high, and interspersed with wadys, or valleys, affording a supply of water, and supporting some trees, shrubs, and grass. Many days' journey elapse without travellers having an opportunity of filling their bags with water. Its aspect is extremely rugged; but Burckhardt, after having passed through those of Suez and Sinai, did not think it quite so dreary.

The western desert appears much more desolate. Travellers, indeed, after their departure from Siout, are refreshed at Khargeh, or the Great Oasis; but, having quitted its limits, find nothing but an unvaried waste of sand. Even the wells, which occur only at a wide distance, and of which the principal are at Sheb, Selimé, and Leghea, though they produce a verdure which relieves somewhat the nakedness of the desert, offer nothing which can be food for man or beast. Poncet strongly describes the painful impression made by a scene, "where we meet neither with beast, grass, nor even so much as a gnat; and see nothing but mountains of sand, carcasses and bones of camels." The caravan to Darfour has about 800 miles of this tract to pass through, ere it reaches Cubcubea. That to Sennaar, again, touches the Nile at Moscho, and proceeds through Dongola to Korti. It then strikes across the desert to Bahiouda, which, containing a few trees and herbs, does not present so frightful an aspect as the western solitudes.

Another line of commercial intercourse reaches across from the district of Berber to the Red Sea. It is far from presenting the same desert aspect as those just described. On the contrary, the district of Taka, through which it passes, is famous over all these countries for its extreme fertility. Though the capacities of the soil are by no means duly improved by cultivation, yet its dhourra sells in the markets of Jidda 20 per cent. higher than that of Egypt; and its breeds of camels and oxen are said to be equally excellent. The Arabs of Taka are a warlike race, engaged in almost continual contests with the Bishareen, a fierce tribe who wander over the neighbouring deserts. They are robust, hardy, hospitable among themselves, but accused of treachery and inhospitality to strangers.

After three days' journey through this tract, the caravans arrive at Suakin, or Souakin, the only sea-port of Nubia. The island on which it is situated was seized in the sixteenth century by the Turks, who made it their maritime capital on the Red Sea. De Castro, at that time, found it one of the richest and most flourishing cities of the East, and had seen nothing equal to it except Lisbon. All this splendour has vanished with the loss of the Indian trade, and only a few wretched dows are seen unloading their cargoes by the side of some miserable houses. The Turks still retain Suakin, though with so small a force that they dare not set foot on the main land opposite. The harbour retains all its excellence, being capable of holding 200 large, besides a prodigious number of smaller vessels. The conveyance of pilgrims and slave-traders to Jidda is the only support of what remains to Suakin. Two minarets, however, attest its past splendour, and the general custom of whitewashing the houses gives it still a handsome appearance when seen at a distance.

CHAPTER IV.

ABYSSINIA.

After tracing upwards the course of the Nile, we come to Abyssinia, the region from which that river derives much of its immense store of waters. The Bahr el Abiad, indeed, flows from the yet unknown interior of the continent; but a large portion of the stream which penetrates Nubia, and inundates Egypt, is poured down from the country to the eastward, where the mountains, rising to a stupendous height, yield copious supplies of water. That prime element of tropical cultivation renders Abyssinia the most fertile country in this part of Africa, and, with a very few exceptions, in the whole continent.

Sect. I.—*General Outline and Aspect.*

Abyssinia, in a manner insulated amid rocks, deserts, and boundless plains, though it has imbibed some elements of civilisation, has scarcely any intercourse with the civilised world. On the east, it is judged to be bounded by the Red Sea, with which, however, the proper domain of Abyssinia comes in contact only at one point. On the north it communicates with the deserts of Nubia, traversed by wandering Arabs. On the west it has Sennaar; and, on the south, the Mahometan kingdom of Adel, or Adaiel: but the greater part of these two last frontier lands consists of wild regions occupied by the Galla, who always ravaged, and have recently conquered, a large portion of the Abyssinian monarchy. It is difficult even to guess the dimensions of a region of which there are no fixed limits, measurements, or surveys; but somewhere between 700 and 800 miles from east to west, 500 and 600 from north to south, may form a tolerable approximation.

Abyssinia has been described as entirely a country of mountains. Chain succeeds chain; and the level tracts which cover a great extent of the kingdom bear almost all the character of mere mountain valleys. The ridge of Lamalmon is the best known to Europeans, who have to cross it in entering Abyssinia from the Red Sea to Gondar. The mountains of Samen (*fig.* 799.) to the south, however, are still more lofty, and the same may be said of those of Gojam, which give rise to the Abyssinian Nile. Of Shoa, Efat, Damot, and the other southern provinces, our information is less precise; but it appears that they consist equally of an alternation of high mountains and deep valleys. All these mountains present forms peculiarly rugged and precipitous. The representations given by Mr. Salt fully exhibit the chaos of rocky masses into which these mountains are thrown; though he disputes the accuracy of Mr. Bruce, who represents them, in many cases, as pyramids pitched on their tops. In many of these mountains, the summit forms a plain of some extent, encircled by walls of rock, which, being accessible only by ladders and cordage, may be called a natural castle. Such, in Amhara, was the mountain of Amba Geshen, in which the princes of the blood royal were confined, as a security against those machinations which are so dangerous in an unsettled government.

799

Mountains of Samen.

Abyssinia is not less a country of rivers than of mountains. The eastern tract, above the province of Gojam, gives rise to the *Bahr el Azrek*, or Blue River, so much celebrated, in modern times, as presenting the long sought-for head and source of the Nile. It is, indeed, so considered in Abyssinia; and all the Portuguese travellers and missionaries, from whom alone our early information is derived, were impressed with the same idea. It is not, therefore, wonderful that Bruce went on his travels with this impression, and that, after having placed his glory in the discovery, he should have been slow in admitting the observation of D'Anville, that the Bahr el Abiad, admitted to be the greater stream, had in all respects the best title to be considered as the Nile of the ancients. Numerous waters rising in the same chain of mountains flow first eastward, and form the great lake of Dembea, one of the most conspicuous features of Abyssinian geography. From the eastern shore of this lake the Blue River then issues, and, making a vast semicircular sweep round the province of Damot, passes westward not far from its original source. It finally turns northward, receives from the south the copious accession of the Maleg, and, becoming the river of Sennaar, falls into the Bahr el Abiad, as we have seen, considerably beyond the Abyssinian frontier. The Tacazze, with its auxiliary streams, the Mareb and the Coror, drains all the high chains of Western Abyssinia, then makes its way through the Nubian desert, and pours its large tribute into the Nile. The mountains in the south give rise to two rivers, the Hanazo and

the Hawash, which direct their course eastward, but meet extensive plains of sand, through which they are either naturally or artificially dispersed, and thus lost, before they arrive at the Red Sea.

SECT. II.—*Natural Geography.*

SUBSECT. 1.—*Geology.*

We do not find any precise information regarding the geology of this vast alpine land in the writings of travellers.

SUBSECT. 2.—*Botany.*

Abyssinia, doubtless, in its vegetation, as in its geographical position, borders on Egypt; and here want of space and want of information compel us to be very brief; for, though two eminent modern travellers have visited that country, Bruce and Salt, and though one of these, in particular, has given a chapter to the most remarkable plants, yet, for want of scientific names and descriptions, they cannot always be satisfactorily determined. Mr. Salt's collection, according to Mr. Brown, amounted to about 260 species, and in its character is somewhat extra-tropical, bearing but little affinity to the vegetation of the opposite and western coasts of Africa, in the same latitudes. In the Protea abyssinica, observed by Bruce, and Pelargonium abyssinicum and Geissorrhiza abyssinica, found by Salt, it more resembles that of Southern Africa. The first plant Mr. Bruce notices is the Papyrus, of which he has given a full history. In Abyssinia, its roots are chewed in the manner of liquorice, and a considerable quantity of sweet juice is thus obtained. One of the angles of the stem is observed to stand opposite the stream, like the cutwater of a boat, or the sharp angle of a buttress of a bridge, by which the pressure of the stream upon the stalk would be greatly diminished.

The Balessan Balm, or Balsam, is the Amyris Opobalsamum (*Linn.*) Balsamodendron Opobalsamum (*De Cand.*), of which a full account has been given by Bruce. The Sassa Myrrh, or Opocalpasum, is the Juga (?) Sassa of Willdenow and De Candolle. This plant yields a very light gum, which Mr. Bruce believed to be the Opocalpasum of Galen. In water, this substance swells, turns white, and loses its tenacity. In quality it much resembles Gum Tragacanth, and may be eaten with impunity. The native merchants use it to set a gloss on the blue cloths of Surat, when they come in an injured state from Mocha. The tree that produces the Sassa is as high as our largest elms; the gum covers almost all the trunk and the principal branches, issuing in large globules, which often weigh 2 lbs. each, though the substance is of a light nature. The bark is thin and bluish-white, the wood white and very hard; the flowers of a crimson red; the filaments of a violet red, and purple at their extremities. The fruit has never been observed.

Ergett y' Dimmo is Desmanthus divergens of Willdenow and De Candolle; Ergett el Krone, Mimosa polyacantha (*Willd.*), is probably not different from M. asperata. The Ensete is Musa Ensete (*Gmel.*), a species of Banana, which grows in the Abyssinian marshes, where there are large plantations of it; and it is almost the sole food of the inhabitants. They eat the green leafless stem, which is many feet high, and an excellent vegetable; scraping off the green skin, and cooking it like turnips, which it somewhat resembles in flavour; and is light, wholesome, and of easy digestion. The Kol-Qual is the Euphorbia antiquorum; and Bruce says that though he was prepared to see wonders, yet this tree much surprised him. The ripe fruit, of a crimson colour, and borne on the top of the branches, gave the trees, that stood thick together, a veil of the most vivid red. The tree, which sends out most vigorous shoots, is succulent, and leafless below, and bears many golden-coloured flowers, succeeded by red fruit. From the green leaves an almost incredible quantity of milk issues; and, on severing two of the finest branches, no less than four gallons flowed out, of so caustic a nature that, though the sabre used for the purpose was immediately washed, the stain long remained. When the tree grows old, the branches wither, and, in place of milk, the inside appears to be full of powder, which is so pungent, that the small dust that flies, on a touch, from the branch, excites dreadful sneezing, while the milky juice excoriates the fingers. Still the woodpeckers pierce these rotten boughs, apparently with perfect impunity. The only use the Abyssinians make of this fluid is for tanning hides, at least for taking off the first hair. The Rack appears evidently, from the description and figure, to be a species of Avicennia; it grows near the sea-shore, and the Arabs build boats of the wood, which is hardened by the sea, and so bitter that no worm will touch it. Toothpicks, made of it, are sold in small bundles at Mecca, and are reputed to be favourable to the teeth, gums, and breath. The Gir-Gir, or Geshe el Aube, a grass, the favourite food of the goats about Ras el Feel, is the Andropogon afer (*Gmelin*). Kantuffa, a thorny tree, which, says Bruce, "like many men we meet daily in society, has wrought itself into a degree of reputation and respect, from its noxious qualities, and the

power it has of doing ill, together with the constant exercise of these powers, is an universal nuisance in the country where it grows; seizing the raiment of the men, whether coarse or fine, and giving them the alternative of dropping their garments and appearing naked, or of extricating them, torn to rags; and laying hold of the long hair of the women. So dangerous is it for the natives of Abyssinia to leave this thorn standing, that every year, when the king marches, among the needful proclamations this is thought needful, 'Cut down the Kantuffa in the four quarters of the world, for I know not where I am going.' The wild animals well know the shelter that this shrub affords them; and they would be perfectly secure but for a hard-haired kind of terrier, of the smallest size, who, being defended from the thorns by his rough coat, goes into the bush, and brings the game, one by one, to his master." This plant is the Pterolobium lacerans of Brown's MS. in Salt's Abyssinia, and the Mimosa (?) Kantuffa of De Candolle. Gaguedi is the Protea abyssinica. Wanzey (*Cordia abyssinica* of Brown in Salt's work) is a common tree throughout Abyssinia; and so universally planted in the towns, that they have the appearance of a wood. "Gondar, in particular, at the season when the white flowers of this tree, which come out in a single night's time, appear, looks as if covered with white linen or new-fallen snow. To this tree, and the coffee tree, divine honours are paid by the Abyssinians. Under its shadow the king is chosen, and holds his first council; and his sceptre is a bludgeon made of its wood, carried in state before him. Farek (*Bauhinia acuminata* of Bruce, not Linn.), the Bauhinia Farek of Desvaux, was found on the banks of a brook, which, falling from the west side of the mountain of Geesh, down the south face of the precipice where the village is situated, runs into the lake Gooderoo. It is the water we employed for common uses, not daring to touch that of the Nile, unless in drinking and dressing our food. It grew in the side of a cliff, not 400 yards from the fountain of the Nile itself. Its name of Farek itself is derived from the division of the leaf. Kuara (the *Erythrina abyssinica* Lamarck and De Candolle) (*fig.* 800.), is a beautiful tree, and bears a red bean with a black spot in the middle, which has been, from the earliest ages, used as a weight of gold among the Shangalla, and where that metal is found, all over Africa; and repeated experiments have proved that the seeds vary so little in weight, that a better choice could not have been made between the collectors and buyers of gold. From its name of carat, the weight of gold is derived, and, passing from the gold country of Africa to India, it came to be used for weighing precious stones, especially diamonds; so that to this day both gold and diamonds are said to be so many carats fine." Walkuffe is evidently a plant of the Natural Order Buttneriaceæ, and described in the *Encyclopédie Botanique* under the name of Walkuffia Pentapetes. But it is probably not different from Cavanilles's genus Dombeya, of Bourbon and the Mauritius. It is spoken of as a tree of inimitable beauty. Woogniocs, a powerful medicinal plant, grows abundantly in Ras el Feel, where dysenteries reign considerably; "Heaven having put the antidote in the same place with the poison." Both there and through all Sennaar, the inhabitants are well acquainted with the virtues of this plant, and it was successfully employed on Bruce himself, when all other means of cure had failed. Our traveller brought seeds with him to England, and the plant is now not uncommon in our stoves. Sir Joseph Banks named it, in honour of its distinguished discoverer, Brucea dysenterica. Cusso is a celebrated vermifuge in Abyssinia. It is the Hagenia abyssinica of Lamarck (*Banksia abyssinica* of Bruce). The Abyssinians of both sexes, and at all ages, are troubled with a terrible disease, which custom, however, enables them to bear with some indifference. Every individual, once a month, evacuates a large quantity of worms; and the method of promoting these evacuations is by infusing a handful of dry Cusso flowers in about two English pints of Bouza, the common drink of the country. While taking this remedy, the patient stays in the house, unseen by any one, from morning till night. The want of this drug is thought to shorten the lives of those Abyssinians who travel. It is always planted near churches, for the benefit of the town or village, and grows about 20 feet high. The Teff, or Poa abyssinica, is commonly sown all over Abyssinia, and from it is made the bread generally used throughout the country, alike by the king and peasant. The manner of making it is by taking a broad earthen jar, and, having made the pounded grain into a lump with water, they set it at some distance from the fire, where it begins to ferment; they then bake it into circular cakes about two feet in diameter. It is of a spongy soft quality, and a sourish, not disagreeable taste. At the Abyssinian banquets of raw meat, the flesh, being cut in small bits, is wrapped up in pieces of this bread, with salt and Cayenne pepper. The principal people eat the White Teff, which is made of finer grain; and the coarser sort serves the poorer classes. Every man wipes his fingers on the bread which he leaves for his successor, which Bruce truly calls "a most beastly custom."

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Erythrina Abyssinica.

The Teff bread, after being well toasted, is put into a large jar, closely covered, after being broken into small pieces, and warm water poured on it: it is then set by the fire, and frequently stirred; after three or four days it acquires a sourish taste, and is what they call Bouza, or the common beer of the country.

An appendix to Bruce's Abyssinia contains the following, more or less interesting, plants; but to which we dare not give other names than those under which they are published:—"Cassia Fistula," which Bruce says, though growing in Syria, Egypt, and Arabia, is a stranger in these places. Abyssinia is its native soil, and the goodness of the drug which it produces in all these countries is in proportion to their vicinity to its native country. The "Lehan, or Tabernæmontana," a tree of which nothing can exceed the beauty and fragrance. "Krihaba" appears to be a species of Bamboo, growing to a height of 55 feet, and to have been worshipped anciently among the Agow nation. "Anguale" is a tree found near the river Tacazze, and believed to be what bears the true Frankincense; and it produces, indeed, a gum very like it. The Gesh is a very common tree in Abyssinia, the leaves of which the people are accustomed to put in their hydromel or mead; they are also reduced to powder, and mixed with the mass from which the Abyssinians make bouza. "Merjoubey" indubitably is a species of Solanum, whose fruit, combined with other ingredients, is used as a cathartic. The "Nub" (*Polymnia frondosa*) a syngenesious plant, yet in the description said to be a species of Sesamum. It is from this herb they extract most of their vegetable oil. "Umfar, or Amfar," is determined by Mr. Brown to be a Buddlea (*B. acuminata*). "Kummel" is stated to be a species of Mimusops, of which the fruit is probably esculent, though nothing is said of its properties.

SUBJECT. 3.—*Zoology.*

The Zoology of Abyssinia is still but imperfectly known, although the general accounts given by Bruce, and by subsequent travellers, are, perhaps, sufficient for the general reader: the first of these writers, however, is frequently inaccurate. The Elephant, Rhinoceros, Lion, and some kind of Panther, are not uncommon; while the northern Giraffe, Camelopardalus antiquorum, *Sw.*, now known to inhabit Nubia, is in all probability found in the less frequented parts of Abyssinia.

Among the more local quadrupeds we may enumerate the following:—

Megalotis Ruppelii. Bruce's Fennic. | Hyrax syriacus. Syrian Hyrax. | Sciurus rutilans *Rupp.* Abyssinian Squirrel.
Viverra Civetta. Civet. | Antilope Soemmerringii *Rupp.* Black-fronted Antelope. | Capra Jaeta. Abyssinian Ibex.
Lynx Chaus. Bonted Lynx.

The Civet (*fig.* 801.) is the only quadruped we shall particularly notice, as having long been celebrated for the odoriferous substance which it yields. This animal measures about two feet and a half in length; the tail is not more than one foot, and the height one foot and a quarter: the body is marked by narrow, black, transverse bands upon a gray ground, narrow, and parallel with each other on the shoulders, larger on the body and the thighs, and which sometimes form eyelike spots, like those on the panther: the tail has four or five black rings, and is broadly tipped by the same colour. The odoriferous substance is contained in a bag, opening by a narrow cleft near the vent: this scent was formerly in much more request than it is now. The Civet of India is the same as that of Africa: and Father Poncet has asserted that Emfras, a town of Abyssinia, is celebrated for the Civet trade, an immense number of these animals being there brought up in a state of domestication for this sole purpose. He further affirms, that with some of these merchants he has seen upwards of 300. The Civet is a particularly drowsy animal, and is roused from sleep with much difficulty. When irritated, the odour of musk becomes stronger, and from time to time it falls from the pouch in small pieces about the size of a nut.

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Civet.

The Abyssinian Ibex (*Capra Jaeta* Ham. Smith) is but imperfectly known, and merits the attention of future travellers. It is supposed to be the animal mentioned in the book of Job, under the name of Jaal. This interesting species, differing in many respects from the European Ibex, is said to be numerous in the mountains of Abyssinia and of Upper Egypt.

The Domestic Oxen are of a large white breed, with long horns; but the greater number are variously coloured. The Abyssinian breed of hunched cattle is somewhat peculiar: they are marked with black and white in clouds; low on the legs, with the horns hanging loose, forming small horny hooks nearly of equal thickness to the point; turning freely either way, and hanging against the cheeks. This breed, by being transferred to Caffraria, and crossed with the straight-backed, has lost its hump: it is esteemed very valuable. (*H. Smith.*)

The Ornithology is no doubt interesting; but the materials for forming an opinion on its

general nature are much scattered, and not very precise. The Golden Eagle has been mentioned by Bruce; but the accounts of travellers, not themselves conversant with natural history, are now very justly viewed, on all occasions, with great suspicion. We shall, therefore, restrict our notices to the most remarkable authenticated species.

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Abyssinian Hornbill.

The Abyssinian Hornbill (*Buceros abyssinicus* Lath.) (*fig.* 802.) is of very large dimensions, little inferior to a turkey in size; and, like that bird, is said to have a wattle under the throat, changing at times to a full red: there is a large horny nob on the forehead; the quill feathers are pure white; but the rest of the plumage is dark. The nest is made in large trees, and of such unusual dimensions, as to be four times as large as that of an eagle; it is covered like the magpie's, the entrance being on the east side: it is the largest bird of the genus, sometimes measuring three feet and a half long. Mr. Salt mentions another species, the Yellow-billed Hornbill, not larger than a magpie. One of the lovely Turaccos, or Crown Birds, in all probability a distinct species from that of Guinea, is known in Abyssinia; the plumage is grass-green, of a soft silky texture, and the head is adorned with an elevated semicircular crest of delicately webbed feathers.

The Hyreus, or Abyssinian Plant-cutter (*fig.* 803.), is a bird of great rarity, no museum in Europe being known to possess a specimen; it is not much bigger than a common grosbeak, or sparrow; but it has only three toes, and the margins of the bill are finely toothed in the manner of a saw; the plumage is black, with the head, throat, and breast red: according to Bruce, it is a solitary species, frequenting woods, and feeding upon the kernels of hard nuts; but this may reasonably be doubted, since the saw-like margins of the bill appear destined to cut off plants close to the ground, in a similar way as is done by the Chilian Plant-cutter.

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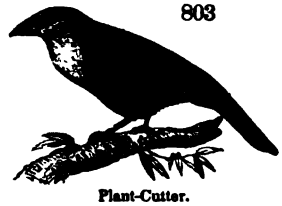

Plant-Cutter.

Several Water Birds inhabit the lakes and mountain streams. Of these, we shall only mention the African Jacama (*Sw. Zool. Illust.* 2.); a most graceful bird, of the size and habits of the water-hen, but with toes and claws of extraordinary length.

Sect. III.—*Historical Geography*

Abyssinia was little known to the ancients. None of the conquerors of Egypt were able to penetrate, across Nubia and Meroe, into this ulterior region. The tradition which makes the Queen of Sheba an Abyssinian princess, and the monarchs of that country the descendants of Solomon, seems to rest on a very chimerical foundation. The Ptolemies, in extending their commerce, became intimately acquainted with all the ports of the Red Sea. Their observations thus reached the kingdom of the Axumitæ, whose port, Aduli, was celebrated for the great quantity of ivory which was shipped from it, and whose capital, Axum, exhibits splendid monuments, bearing somewhat of an Egyptian character. The same territory, though now forming a loose appendage to Abyssinia, continues to be the sole channel of its trade. The Abyssinian annals represent the country as converted to Judaism several centuries before the Christian era; and it certainly retains many observances bearing the stamp of that faith. In the fourth century, the nation was converted to Christianity, by the efforts of Frumentius, an Egyptian, who raised himself to high favour at court. Abyssinia remained impenetrable to the arms or the creed of the followers of Mahomet, and, affording shelter to the refugees from Egypt and Arabia, it became more decidedly Christian. To the Portuguese, when they began their grand career of maritime discovery, this country was an object of eager enquiry, as being the supposed seat of the chimerical prince whom they named Prester John. Its situation, too, at the bottom of the Red Sea, appeared, before it was thoroughly known, likely to be favourable to a trade with India. Early in the sixteenth century, Covilham reached it by way of Egypt, and was followed by successive embassies and missions. The Abyssinians adhered to the Eutychean sect, held the Monophysite doctrine, and owned the supremacy of the Patriarch of Alexandria; the Portuguese, therefore, although this system was rather less superstitious than their own, considered it little better than pagan, and made incredible efforts to convert the Abyssinians to the Catholic faith, and obtain their allegiance to the see of Rome: in fact, Paez, a missionary of great address, persuaded the king, Susneos, in 1620, to proclaim the Catholic religion to be that of the state. This step, however, occasioned violent civil wars, which ended in the total expulsion of the Portuguese. Since that era, Abyssinia has maintained scarcely any intercourse with the powers of Europe. It had been almost forgotten among us, until the popular and animated

narrative of Bruce made it again familiar; and, notwithstanding some vague and vaunting statements, the general accuracy of his information has been confirmed by subsequent enquiry. Mr. Salt has also favoured us with recent and accurate, though somewhat less extended, observations on the same subject.

Abyssinia has been always governed by native princes; though disputed succession, and the rebellion of the military chiefs, frequently involved it in the calamity of civil war. These evils, rising to a peculiar height, exposed the country to the inroad of the Galla, a race of warlike and powerful savages from the south. By successive conquests, they have become themselves masters of all the central provinces, which their chiefs govern under the name of an Abyssinian prince. The position thus held by them separates Abyssinia into two parts, of which the northern division of Tigré was administered, in Mr. Salt's time, by Ras Welleta Selasse, who has since been succeeded by Subegadis, an able chief, who is aiming at the recovery of Gondar. The southern provinces of Shoa and Efat, again, are held by a prince descended of the royal family.

SECT. IV.—*Political Geography.*

The constitution of the Abyssinian monarchy has been, in theory, a complete despotism, no limit being assigned or prescribed to the absolute power of the sovereign. The country, in fact, appears to have been in a better state, when this system of government really prevailed. For some time past it has exhibited the calamitous picture of a broken-up despotism. The continual conflicts with the Galla and other barbarous neighbours have thrown extraordinary power into the hands of the governors of provinces and the military chiefs; and every thing has finally become almost wholly subject to the law of the sword. The nation, however, still holds the race of its kings in such reverence, as to make it unsafe for those armed usurpers openly to place the crown on their own head. They choose, therefore, some branch of the royal family, to whom they leave the form and shadow of sovereignty, and in whose name they administer public affairs. Even the Galla chiefs, who, as already observed, are become masters of half the kingdom, and of its capital, Gondar, have found it expedient to adopt this policy.

SECT. V.—*Productive Industry.*

Abyssinia is a very fertile region. Its valleys, supplied with copious moisture from the numerous mountain ranges, are completely exempted from the arid character of tropical plains. They maintain a rough plenty, with little aid from human art. The only disadvantage of the soil is, that the combined influences of heat and moisture produce often a rank fertility, which unfits it for the production of the finer kinds of grain. Wheat can be raised only on the higher grounds, and for the consumption of the rich. Barley is also cultivated, but chiefly for the feeding of horses. That which constitutes the food of the people, and can be raised almost on every soil, is *teff*, a weak herbaceous plant, with a stalk not much thicker than that of a carnation, and the seeds of which, though scarcely the size of a pin's head, by their great number make up a bulky crop. The lowest grounds produce some still coarser kinds of grain, which are mixed with *teff* and barley in making bread. The Abyssinian plough is extremely rude, often without iron. The operations of weeding and reaping are entirely performed by women. The low state of this important art may be inferred from the circumstance, that scarcely such a thing is known as corn brought to sale, and that each family raises what is necessary for its own use. The upland districts abound with horses and cattle, which, with cheese and butter, form objects of exchange. Bees are bred in great numbers, and the honey is of good quality. It is not only used for food, but, being mixed with maize, is formed into a fermented liquor, which is the favourite drink of Abyssinia. Cotton is raised in considerable quantities, though not sufficient for supplying the fabrics of the country.

The mineral wealth of Abyssinia is small. No metallic substances are worked, or are known to exist; although, from the mountainous character of the country, there is little doubt that a search for them would be rewarded with success. A little fine gold is found in the sands of its eastern rivers; but the greater part, even of that article, is brought from regions farther in the interior. The most important fossil production is salt, drawn from a great plain in the western frontier, and even beyond its limits. The salt on the surface is hard and crystallised, like ice on which snow has fallen; but at the depth of two feet it is coarse and softer. It is cut with an adze into pieces, which, like the cotton cloth, are used as money. The employment of cutting it is dangerous, since both the workmen who dig the salt, and the caravans which convey it, are exposed to the attack of the Galla. A military force is therefore employed, under the command of an officer called *balgudda*, who receives payment for his services in salt.

The manufactures of Abyssinia are of a rude character, and merely adapted for its home consumption. The staple is cotton stuffs, with which the people are universally clothed.

Fine cloths are manufactured at Gondar, the capital, and coarse at Adowa; the latter, from their universal demand, serve in this rude state of commerce the purpose of money. The Abyssinians cannot dye their cloth dark blue, but are obliged, when they wish to introduce a mixture of that colour, to unravel the threads of the blue cloth of Surat. Coarse carpets are also manufactured at Gondar and in Samen, though for fine carpets the Abyssinians depend upon Persia. The demand for arms being regular and extensive, considerable industry is employed in manufacturing them. Adowa is distinguished for the fabric of knives, and Antalo for that of spears; and similar articles are imported from Sennaar and the district of Berbera.

The foreign commerce of Abyssinia is far from extensive. Goods can be imported only at the single point of Massua, and thence conveyed through the empire by the laborious route of the caravans. Almost all the articles of refined luxury must be procured from abroad; but the demand for these is very limited. From Surat are imported both raw cotton and fine manufactured cloths; carpets from Persia; raw silks from China; velvets, French broadcloths, coloured skins, from Egypt; glass beads and decanters from Venice. For these articles Abyssinia can give in return only ivory, gold, and slaves, the staples of interior Africa, between which and the eastern frontier of this empire there must exist a considerable communication, though yet undescribed by European travellers. This country, however, as a channel for the above trade, by no means equals Nubia. The slaves, indeed, are in some demand, being considered particularly handsome. On the whole, it appears that, until Abyssinia shall attain a much higher degree of improvement, its commerce cannot be a material object to any European power.

Sect. VI.—*Civil and Social State.*

The manners of the Abyssinians, under a slight semblance of civilisation derived from Arabia and Egypt, present indications of the deepest barbarism. Indeed, their domestic life is marked by habits more gross and revolting than any that have been witnessed among the most savage tribes. Some, indeed, are such, that the bare report of them shook the credit of one of our most eminent travellers, who had not, however, been the first to report them, and whose testimony has since been fully confirmed.

The luxury of the brinde feast is that which has particularly excited the astonishment of travellers. Slices of warm flesh cut from the ox standing at the door, are brought in, with the blood streaming and the fibres quivering, and are eagerly swallowed as the choicest delicacy. According to Mr. Bruce, the animal is yet alive while the slices are cut from him, and is heard bellowing with the pain; but Mr. Salt asserts that he has been just that instant killed: probably there may be some variation of practice. This strange food is as strangely administered. The chief is seated between two ladies, who wrap up the delicious morsels in teff cake, and thrust into his open mouth the utmost quantity which it is capable of receiving; "just," says an old traveller, "as if they were stuffing a goose for a feast." The ladies are then at liberty to satisfy their own appetite, and when these refined members of the company have supplied themselves, the servants succeed, and clear the table. The grossest indecencies are said by Mr. Bruce to be acted at these feasts; an assertion which Mr. Salt does not fully confirm, though he admits that the conversation is marked by the least possible reserve.

The *shulada*, a similarly savage custom, is practised by the drivers of cattle. When they feel hungry on the road, they stop the animal, cut out a slice from him, close up the wound, and, having satisfied their hunger, drive him on.

A general ferocity and promptitude in shedding blood, seems to characterise the Abyssinian nation; and is, doubtless, stimulated by the frequency of civil and of foreign wars. The principal officers scruple not to execute in person the sentence of death, which the king, or whoever he may be whom they obey, has passed against any individual; and they perform this horrid task with the most perfect coolness and indifference. While Mr. Bruce resided at Gondar, during a period of commotion, he could not stir out without seeing the victims of civil strife left unburied in the streets, to be devoured by the dogs and hyenas.

The manners of the Abyssinians are not less distinguished by licentiousness than by cruelty. Intoxication is very prevalent, produced partly by hydromel, but chiefly by bouza, a drink well known also in Egypt and Nubia, and mostly produced here from the fragments of teff cakes brought from table. Marriage is scarcely considered by Mr. Bruce as existing at all; so great is the ease with which the contract may be formed and dissolved. The lover consults only the parents of the bride, and, having obtained their consent, seizes and carries her home on his shoulders. A *brinde* feast concludes the ceremony. Sometimes it is rendered a little more formal; the parties going, two or three weeks after their union, to church, and taking the sacrament together. A lady was met at Gondar, in company with six persons who had been successively her husbands. Ladies of rank assume great sway over their

partners, and are at the same time very little observant of the duties which the marriage bond imposes. Polygamy is very common, though a great pre-eminence is allowed to one wife, and the rest are considered merely as concubines.

The Abyssinians profess the same form of Christianity with the Copts of Egypt, and even own the supremacy of the Patriarch at Cairo. From him the Abuna, the actual and resident head, receives his investiture. By a regulation supposed to have been adopted with the view of securing a greater measure of learning than could be expected to be found in an Abyssinian, this pontiff must be a foreigner. As such, however, he is usually ignorant of the language; and his influence, and means of holding communication with the people, are much circumscribed. The Abyssinians combine with their Christian profession many Judaical observances, such as circumcision, abstinence from meats, and the observance of Saturday as well as Sunday as a Sabbath. At the same time they share amply the observances of the Roman Catholic church. Their calendar of saints is equally numerous; scarcely a day occurs, which is not consecrated to one or other of them, and sometimes to several. They maintain that no nation, except themselves, holds the Virgin in due reverence; and in this respect even the Catholic missionaries found themselves outdone. Their churches are numerous, and adorned with paintings; but images and sculptured forms of any description are considered unlawful. They have monasteries, the tenants of which, however, are not at all immured with the same strictness as those in Europe. Upon the whole, the above account of their general conduct shows how little they are under the influence of Christian principles; which do not, it appears, even extend so far as to produce legal prohibition of divorce and polygamy.

Of the learning of the Abyssinians little has been made known by travellers, and indeed it appears to be very limited. Yet they have a written language, the Gheez, which has a great affinity with the Arabic. The Amharic, however, more simple and less harsh, has for some centuries been the language spoken at court. Each province, besides, has its dialect, in which the native Arabic mixes, more or less, with idioms of African origin. There seems to be an expectation that the priests should be able to read; and a slight examination is made of their qualification in this particular: but no similar pretension exists among the laity. Their literature seems to be confined to legends of saints, chiefly translated from the Coptic, and to the chronicles, which are written by persons employed at court for that purpose, on the model of the Jewish chronicles; in these the transactions of each month are separately recorded.

All the houses in Abyssinia are built in a conical form, and with thatched roofs. Some attempt at magnificence is made in their churches, also roofed with thatch, but surrounded by an arcade formed of pillars of cedar; and, being placed on the summit of little hills, they give the country a very picturesque appearance. The sovereign and grandees have also large and commodious residences. The Abyssinians are extremely fond of paintings, or rather daubings, made on the walls of the churches and of the houses of the great; but of these, the glittering colours seem almost the only recommendation.

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Abyssinian Chief.

The dress of the Abyssinians consists chiefly of a large cotton mantle, with close drawers, and a girdle. Round their head they put a white wrapper, which leaves the crown exposed. Many chiefs, as a mark of dignity, wear an ornament in the shape of a horn (*fig.* 804.) projecting from the forehead, which, with their long beard, gives them a very wild and rough appearance. Bruce supposes a similar embellishment to have been worn by the Jews, and to have been alluded to when the exaltation of the horn is mentioned as an emblem of prosperity.

Such are the natives of Abyssinia proper; but the society of that country could not be exhibited in all its deformity without noticing those barbarous neighbours who have harassed it with continual inroad, and have now possessed and covered so large a portion of the country. The origin of the *Galla* is involved in much obscurity. They have evidently come from the depth of that unknown region which composes the southern interior of the continent. They appear to have been long wandering in search of regions more fertile than their own, and were seen about two centuries ago by Lobo, near Melinda; but the fine plains of Habesh seem to have attracted the whole mass of their population. The Galla present an aspect of barbarism, in comparison with which that of the Abyssinian is humane and refined. Their favourite ornament is composed of the entrails of their oxen, which, without any superfluous care in cleansing them, are plaited in the hair and tied as girdles round the waist; decorations which are not only obnoxious to sight, but soon assail the olfactory nerves. The besmearing of their body with melted grease completes their embellishment. Their career is marked by indiscriminate massacre: they spare neither sex nor age, unless from the anticipation of gain by carrying off and selling prisoners. In Europe, they would be considered as a species of light cavalry; they perform immense marches, swim rivers, and endure incredible fatigue. Being almost destitute of

iron, their arms consist of little more than wooden javelins, with the points hardened in the fire. They make a most furious onset, with shrill and savage cries, which strike terror into all but the steadiest adversaries; but, if this first shock be withstood, they are ill-fitted to sustain a regular battle. They have been said to be without religion, and they certainly have neither priests nor temples; but they have been observed to hold certain trees as sacred, to worship the moon and some of the stars, and to believe in a future state. In their persons they are small, and neither in hair nor features resemble the negroes. In general, their complexion is only a deep brown; but this appears to be a consequence of their descent from nations inhabiting mountainous districts: those who have long dwelt on the plains are quite black. They are divided into several tribes, of whom the principal are the Boren Galla, who have occupied the Abyssinian provinces of Dembea, Gojan, and Damot, and even Gondar the capital; and the Adjow Galla, who are established in Amhara, Begemder, and Angot. These Galla, who have long lived among the Abyssinians, have in a great measure exchanged their original customs for the more mitigated barbarism which prevails among their new subjects. Some of the southern tribes have been converted to the Mahometan faith, which for them is an improvement.

Abyssinia is extensively infested by other tribes, still more uncivilised and savage. The Shangalla, or Shankala, a race decidedly negro, of deep black colour, with woolly hair, occupy a most extensive range of territory along the eastern frontier. Bruce conceives them to be the same race who, under the name of Funje, inhabit the banks of the Bahr el Abiad, and are now masters of Sennaar: but this branch, possessed of much higher advantages, is now in quite a different state, both social and political. The proper Shangalla inhabit the deep banks and ravines which border the Tacazze and the Mareb, in the upper part of their course. The numerous streams poured down from the heights, with the intense heat of these close valleys, produce a rank luxuriance of forest and underwood, which, not being pruned by the hand of industry, chokes the growth of every useful production. The hippopotamus, in these waters, rolls his unwieldy bulk, the elephant stalks along the shore; all wild animals here find subsistence, and, as it were, a home. Mixed with them, and only a degree higher in the scale of being, are the Shangalla. During summer, they live in pavilions formed under the shade of trees, the lower branches of which are bent down, fastened in the ground, and covered with skins. When the rainy season, however, converts the whole surface of the earth into mud, they retire to caves dug in the soft sandstone rocks, and subsist on the dried flesh of the animals caught in the favourable season. These are the tribes whom Ptolemy classes under the general appellation of Troglodytæ, or dwellers in caves, and whom he particularises under the titles of elephant-eaters, rhinoceros-eaters, locust-eaters; for there are some whose situation confines them to this last description of food. In the rainy season, the Shangalla are not left to the undisturbed possession of this wilderness. It is a favourite hunting-ground of the Abyssinian monarchs; and the objects of chase are not only the elephant and hippopotamus, but the Shangalla, who, wherever they are seen, are pursued, attacked, and carried off as slaves. This brave and fierce race, however, though without either horses or fire-arms, make often a desperate resistance; they have even undertaken successful inroads into the neighbouring districts of Tigré.

Sect. VII.—*Local Geography*

The entrance of Abyssinia for Europeans is by the town of Massuah, situated on an island in the Red Sea, not more than three quarters of a mile in length. The houses are built chiefly of wooden poles and thatch, but a few are of a species of stone with shells embedded in it. The trade of Massuah was once very extensive, when the intercourse with India was carried on by this channel; but it fell into decay immediately after its subjection to the tyrannical sway of the Turks. Its decline has since been rapid; though, as the only channel by which all the limited trade of Abyssinia passes, Massuah must ever retain some importance. Its foreign intercourse is almost entirely with Mocha and Jidda on the opposite coast; and from these ports it brings India cotton wool and piece goods, European iron, copper, and manufactured goods, to the amount of about 400,000 dollars. The returns are in the usual African staples, brought during the month of February by a caravan from the interior. The Turks governed Massuah by a *naybe*, who has now acquired an authority nearly independent. He levies 10 per cent. ad valorem on all goods which pass through the place.

Opposite to Massuah is Dahlac, or Dahalac, the largest island in the Red Sea, twenty-five miles long and twelve broad. It bears marks of former populousness and importance, and still carries on a little trade. At the bottom of the bay of Massuah is Arkeeko, a seaport once celebrated, but which contains at present only a collection of miserable huts, inhabited by a thievish and degenerate race. Mr. Salt saw reason to think that, could he have searched, he might have found in this neighbourhood the ancient Aduli.

The kingdom of the Baharnegash, as it is called by early travellers, is situated in the interior, south-west from Massuah; but it is rather an appendage to Abyssinia, than an integral portion of that country. The naybe of Massuah has now extended his authority over the greater part of this district. The road from Arkeeko leads first over the lofty mountain of Taranta, covered with fine cedar trees, and affording pasture to numerous flocks. On its opposite side is Dixan, a somewhat handsome town, of flat-roofed houses, built on a conical hill, commanding an extensive view over the high mountains of Tigré. It has a considerable trade, including among other branches, the shameful traffic of selling children. Dobarwa is also an important town, and was the residence of the Baharnegash. The ruder parts of this province are traversed by races of Troglodytic shepherds, called the Hazorta and Shiho, who live in caves, or in small wooden cages covered with hides. They have the reputation of not much respecting the property of those whom they encounter in their wanderings, a charge which applies too generally to the African nomades.

The Mareb forms the boundary between the province of the Baharnegash and that of Tigré proper. This last consists almost entirely of a wild confusion of rocky mountains, affording only occasional spots capable of cultivation. It is enriched, however, by some manufactures, and by its traffic as the channel of all intercourse with the Red Sea. The main theatre of its industry is Adowa, the capital, situated on the side of a hill, and containing about 8000 inhabitants. Cotton cloth, both coarse and fine, is manufactured to a great extent, and passes as money; about 1000 slaves are driven through it annually. Trade is chiefly in the hands of the Mahometan inhabitants, of whom the number is considerable. The inhabitants are rather above the usual standard of civilization.

Although Adowa is at present superior in importance, Axum is the most interesting town in Tigré, and even in Abyssinia, from its extensive monuments, which attest it to have been the ancient capital, and the most conspicuous town in all this part of Africa. In the great square alone there are forty obelisks, one of which is 80 feet high (*fig.* 805.), and considered by Mr. Salt as rivalling whatever is most magnificent in Egypt. From the character of the architecture, it seems to have been erected by the Ptolemies, or in their time; and a Greek inscription, discovered by Mr. Salt, shows this place to have been in the third century the capital of the Axumatiæ. It still contains 600 houses, from which may be inferred 6000 inhabitants; and it carries on manufactures of parchment and of coarse cotton cloth. The inhabitants are rude and inhospitable. Chelicut is also a town of some importance, lately the occasional residence of the sovereign, distinguished for its church, the finest in Tigré, and perhaps in Abyssinia. This edifice is composed of three concentric walls.

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Obelisk at Axum.

Tigré, as a grand division of Abyssinia, contains nine other provinces besides Tigré proper and the maritime district. These are, Agame to the east, a level and fertile territory, bordering on the great salt plain. Enderta, a mountainous province to the south of Agame. It contains Antalo; which, being made the residence of Welleta Selasse, on account of its vicinity to the frontier, became a sort of northern capital. It is situated on the side of a mountain, and contains about 1000 houses, chiefly poor cottages, with thatched conical roofs. Wojjerat and Wofila are wild, low, and wooded districts, reaching to the great lake Ashangi, which abound in wild beasts, and where the Galla are intermixed with the native Abyssinians. Lasta, Avergale, and Samen, are very rugged and mountainous districts, between the Tacazze and the Coror, the two former of which are chiefly inhabited by Agows. The mountains of Samen are the highest in Abyssinia, and frequently covered with snow. Sire and Temben, beautiful provinces, lie immediately to the west of Tigré proper. Sire, in particular, is the most picturesque part of Abyssinia, abounding in valleys, flowery meadows, and shady groves. Tigré, composed of the above eleven districts, now forms a separate and powerful kingdom, since the central provinces have been over-run by the Galla. Though not the most uniformly fertile, it contains the most warlike of the native population. It monopolises all the trade, including the important branches of salt and of muskets.

The central division of Abyssinia, called Amhara, is in several respects pre-eminent. It presents the most extensive level plains, and yields the greatest abundance of corn and cattle. While Abyssinia was entire, and till the whole division itself was over-run by the Galla, Amhara was the residence of the sovereign, and it still contains the principal and most ancient families. The inhabitants are reckoned very brave, and it has even been asserted, that, when well-armed, they are equal to double their number of the other Abyssinians. In this province was the mountain of Amba Geshen, which formed the place of confinement for the younger branches of the royal family.

To the east of Amhara is Begemder, a large and rude province, chiefly employed in pasturage. It possesses the finest breed of horses in the kingdom, and from it were drawn most of the cavalry employed in the Abyssinian armies. The people are under very little subordination, and cannot be called out but by a prince or chief capable of swaying their affections. Its mountains are said to contain iron mines, and it is bordered on the south by a chain of deep ravines, which long formed a barrier against the incursions of the Galla. The province of Lasta, adjoining to Begemder, presents nearly the same aspect.

West of Begemder is Dembea, a province pre-eminent in several respects. It contains Gondar, the capital, and the great lake of Tzana, or Dembea. Gondar is the only place in Abyssinia entitled, from its magnitude, to the appellation of city. In time of peace it contains 10,000 families; but the habitations are in no degree superior to those met with elsewhere, being merely mud cottages, with conical thatched roofs. There are an hundred churches; but the only very handsome edifice is the palace, built of stone, four stories high, commanding an extensive view. The presence-chamber is 120 feet long. For this structure, however, beyond the powers of her native masons, Abyssinia is indebted to the Jesuits, since whose departure it has not been kept in repair, and the two upper stories have become uninhabitable. Emfras is a small but pleasantly situated town, with 300 houses. The province of Dembea is generally flat, and fertile, particularly in wheat. Its produce is assigned for the supply of the royal household.

The lake Tzana, or Dembea, occupying the centre of this province, and forming one of the grand features in the physical aspect of Abyssinia, is fifty miles in length, and thirty-five in breadth. It is formed by the early stream of the Bahr el Azrek, or Abyssinian Nile, combined with numberless other streams poured down from the mountainous tracts in the west. It contains numerous islands, some of which have been used as state prisons.

The Bahr el Azrek, after passing through the lake Tzana, and coming out on its eastern side, makes a grand semicircular sweep of several hundred miles, until it reaches a point not very distant from its origin. This part of its course encloses Gojam and Damot, fine and fertile regions, the latter of which has, by a modern traveller, been painted as a terrestrial paradise. They are pastoral districts, containing numerous herds of very fine cattle. The inhabitants differ somewhat in religion and manners from the other Abyssinians, and have often shown a refractory spirit to the government.

The last division of Abyssinia consists of the southern provinces of Shoa and Efat, with some dependencies little known. These now form a kingdom, entirely separated from that of Tigré by the interposition of the Galla, and governed by a branch of the ancient royal family. Shoa is famous as having, about the year 900, afforded a refuge to the royal family, when the kingdom was seized, and a great part of them were massacred by an usurper. The survivors and their posterity remained in it 400 years, and afterwards resumed possession of the kingdom. Shoa is described as a fine and rich province, containing the bravest and best equipped troops in all Abyssinia. It has been supposed that there are more remains of learning in these southern provinces than in those visited by Europeans.

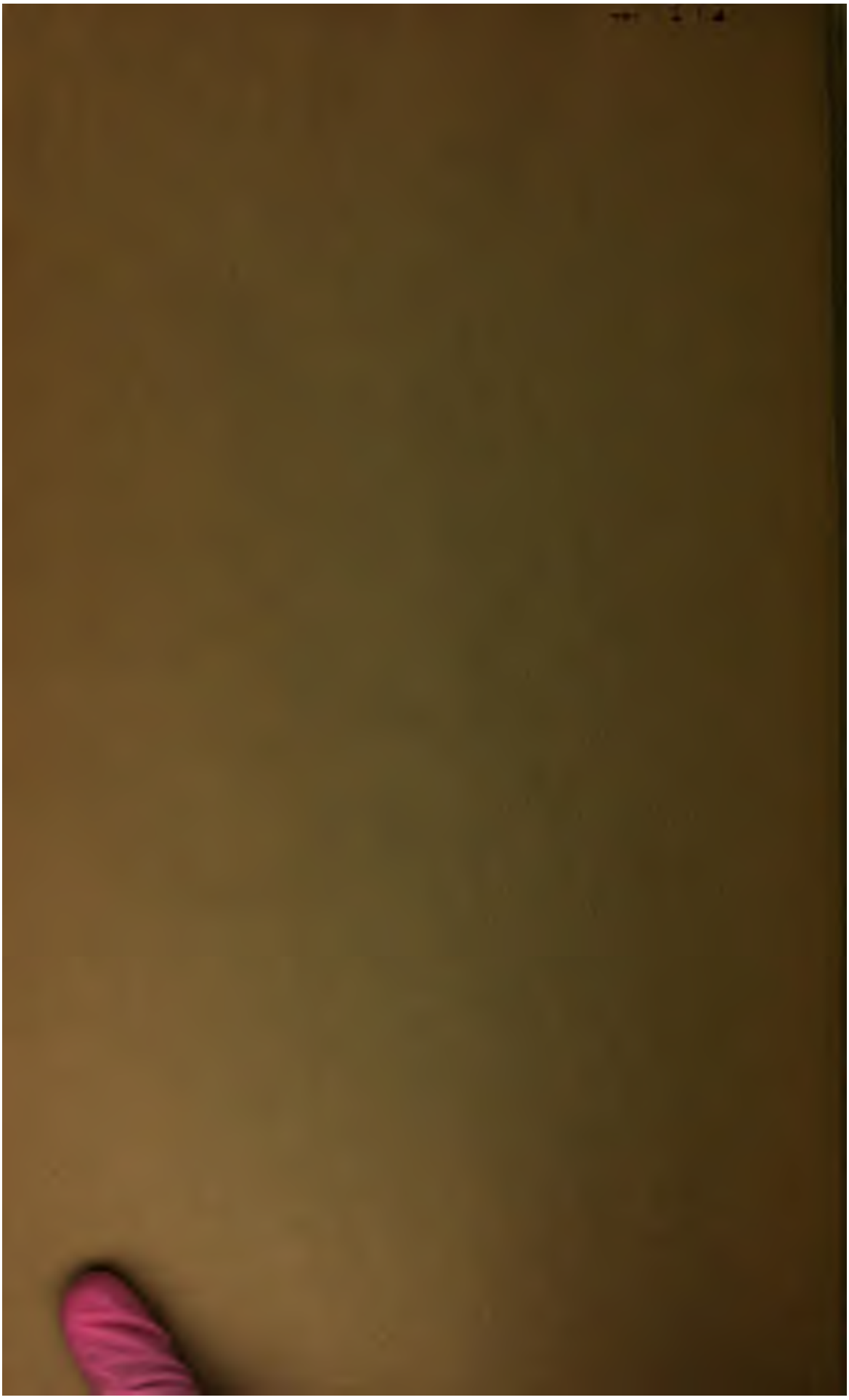
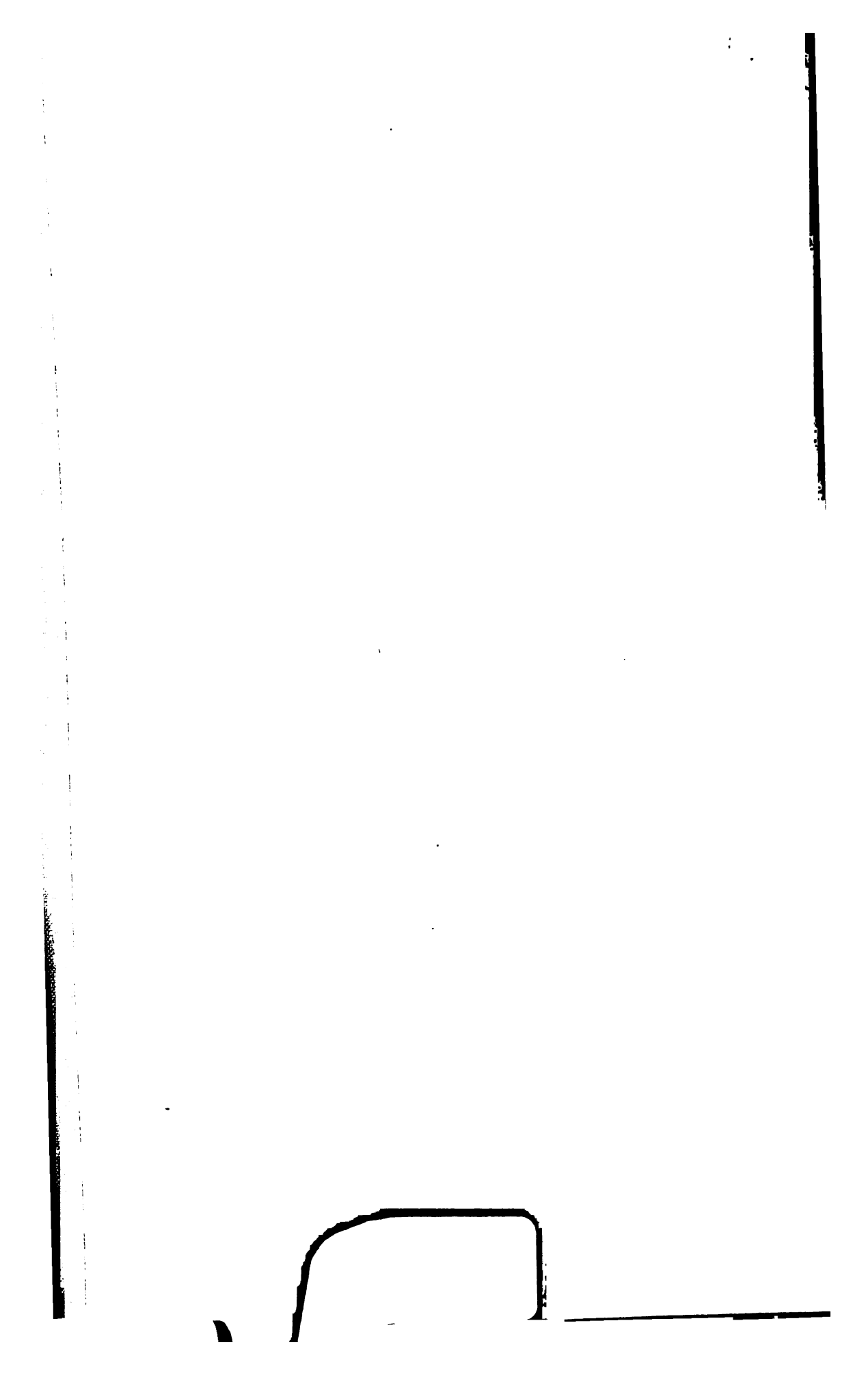
Abyssinia is bordered by a number of loose appendages, subject or tributary to it when powerful and prosperous, but impatient of the yoke, which they throw off whenever opportunity offers. On the east is Angot, which the Portuguese, in the sixteenth century, found one of the finest parts of the empire, and adorned with a number of beautiful churches; but it has since been so entirely occupied by the Bertuma Galla, that it has ceased to be regarded as belonging to Abyssinia. Eastward, as far as the Red Sea, is Dankali, a sandy and saline tract, inhabited by a Mahometan people, called Taltal, who, without being subject to Abyssinia, have been in general submissive allies.

On the western frontier, to the north of Gojam and Damot, is Agow-midré, or the country of the Agows. This remarkable people is somewhat widely diffused; another tribe of them occupies a great extent of the province of Lasta. Their subjection to Abyssinia consists merely in the payment of a tribute in butter, honey, cattle, and hides, partly to the king, and partly to the governor of Damot. Their traffic consists in selling these articles at Gondar; for which purpose they resort to that capital, often in parties of 1000 or 1500. Their mountains do not exceed 4000 or 5000 feet; an altitude which, in that climate, admits of verdure and cultivation to the very summit. Salt circulates with them as money. Their dress consists of leather softened by a peculiar process, and worn in the form of a shirt. Each of their habitations has behind it an immense cave dug in the rock, which does not seem to be now occupied in any shape. Whether its original destination was for a Troglodytic abode, or for a place of shelter in case of barbarous inroad, is matter of conjecture. The Agows were originally worshippers of the Nile; but less than two centuries ago, they were converted to Christianity, and are now strict observers of, at least, its outward forms.

The district of Sancala, in the northern part of this territory, contains the celebrated fountains of that river, which has been supposed to form the main branch of the Nile of Egypt. They are three in number, situated in a marshy plain, at the foot of a mountain nearly 5000 feet high. The natives have erected an altar of turf at each of the fountains; a high-priest

officiates at them; divine honours are paid to them by the Agows, and an assembly of their national chiefs is held annually on the spot. Bruce's boast of having been the first to visit these "coy fountains," has been refuted, and is indeed doubly unfortunate; since neither is this river the main branch of the Nile, nor was he the first European who visited even its sources. They were traced three centuries ago by Peter Paez, and perhaps by Lobo. The charge, however, brought against him, with so much bitterness, of having practised an artful deception, is altogether unfounded. The Abyssinian river is considered as the Nile by the people of the country, by all the Portuguese missionaries, and by all modern geographers prior to D'Anville. The main facts which refute Bruce's opinion are to be found in his own book; for he there states that the Bahr el Abiad is greater than the Nile, and he inserts the narrative of Paez. His error was only one of judgment, into which a man may surely fall, without deserving to be termed a liar.

The Abyssinian Nile, after making the circuit of Gojam and Damot, passes through a low marshy territory, called Maitsha. The soil, which is too moist for grain, produces an herb called ensete, which forms excellent food. Hereabouts are some tribes, the Gafats and the Guragues, of rude habits, and with languages peculiar to themselves. From the turn of the river northward, the interval between it and Abyssinia is filled by Kuara, a wild mountainous country, which receives a governor from Abyssinia when it dares not do otherwise. Its chief importance consists in the gold which passes through its territory from the East.

To the north are Walcayt and Waldubba, wild wooded regions along the upper Tacazze, forming the domain of the Shangalla, already described. The southern regions of Narea, Caffa, and Gingiro, do not seem in any shape to belong to Abyssinia.

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